



**IMPACT STUDY ON DEVELOPMENT OF  
AGRICULTURE AND ALLIED ACTIVITIES**

**IN  
MADHYA PRADESH  
THROUGH KRISHI VIGYAN KENDRAS**

**[AGRICULTURE SCIENCE CENTRES]**



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**PLANNING COMMISSION,  
GOVERNMENT OF INDIA**

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# Chapter – One

## Executive Summary

- 1.1 The agriculture sector forms the backbone of Nation's economy. Since the percentage of workers engaged in agriculture to total workers is 58.80, any attempt to growth with social justice shall have to keep the agriculture on priority list.  
**[Para, 2.1]**
- 1.2 Since the initial years of economic planning, particularly from the Third Plan onwards, agriculture remained the prime agenda of planners. With the advent of new technologies in the field of agriculture, it was felt necessary to come out with package of programme to boost agriculture output to desired levels. The best way, thus perceived was to take technological advancement to farming communities in the form of packages of basic agriculture inputs. **This is where the concept of constituting Krishi Vigyan Kendras took roots in the sensibilities of agriculture experts, that, in subsequent years, took deeper roots.**  
**[Para, 2.4]**
- 1.3 Consequent upon the recommendations of Education Commission [1964-66], the Indian Council of Agriculture Research [I.C.A.R.], Government of India, finally mooted the idea of establishing Krishi Vigyan Kendras [Agriculture Science Centres] as innovative institutions for imparting vocational training to the practicing farmers, school drop-outs and the field level extension functionaries with the following basic suggestions of:-
- Accelerating production relating to agriculture and its allied sectors in the operational area of Kendra.
  - Experiential learning, i.e., “teaching by doing” and “learning by doing” should be the principal methods of imparting training.
  - The benefits of training should reach to the poorest of the poor sections of the community for raising their living conditions.
- [Para 2.5, 2.6]**
- 1.4 During Eighth Plan period the mandates of the K.V.K. was revised as detailed below:-
- Conducting “On Farm Testing” for identifying technologies in terms of location specific sustainable land-use systems.
  - Organising training to up-date the knowledge of extension personnel regarding latest development in agriculture field on regular basis.
  - Organising short and long run vocational courses in agriculture and allied vocations for farmers and rural youth with emphasis on learning by doing for higher productivity and generating self employment.
  - Organising “Front Line Demonstrations” on various crops to generate production data and their information.
- [Para, 2.7]**
- 1.5 In order to achieve the above mandates, the broad **Objectives** of the K.V.Ks. are:-
- Demonstrate the latest agricultural technologies to the farmers as well as the extension workers of the State Departments of Agriculture/Horticulture/ Fisheries/Animal Husbandary/N.G.Os. with a view to reduce the time-lag between technology generation and its adoption.
  - Impart training to practicing farmers/farm women/rural youth and field level extension functionaries by following the method of “teaching by doing” and “learning by doing”.
  - Krishi Vigyan Kendras should have no uniform syllabus, the courses will vary according to the local requirements and specific needs of the targeted groups.

- The district being the operational area of K.V.K. may be covered in phased manner.
- The training courses and other programmes of the Kendras should be in line with the developmental programmes of the government.

[Para, 2.8]

1.6 The basic objective of the K.V.K., therefore, is to carry the technological advancement relating to agriculture to the farms in phased manner to enhance agriculture production through the techniques of vocational training, front line demonstration and on farm testing in spheres of agriculture and its allied sectors including the subjects like home science and training of rural youth for creating the avenue of self employment as well. The phased development of the district is supposed to be achieved by adopting limited number of villages for intensive efforts, the flow effects of which is supposed to influence the cluster group of villages around the periphery of the adopted villages.

[Para, 2.9]

1.7 The frame of the study is as follows:-

a.	No. of K.V.K.	6
b.	No. of Adopted Villages	3 x 6 = 18
c.	No. of Cluster Villages	2 x 3 x 6 = 36
d.	One Control Village from each K.V.K.	1 x 6 = 6
e.	The total number of villages covered	60

[Para, 3.5]

1.8 The methodology consists of details of the schedule as given below:-

**VILLAGE SCHEDULE :** This schedule has been canvassed to all the adopted villages [18], cluster villages [36] and control villages [6].

[Para, 3.7]

1.9 **HOUSE LISTING SCHEDULE :** The information in this schedule has been collected from all the 60 villages.

[Para, 3.12]

1.10 **HOUSEHOLD SCHEDULE :** this schedule consists of 25 percent of the households taken from House Listing Schedule.

[Para, 3.14]

1.11 **INDIVIDUAL QUESTIONNAIRE :** This questionnaire consists of 25 percent of individuals taken from Household Schedule.

## KRISHI VIGYAN KENDRA, BHOPAL

- 1.12 Established in the year 1979, the K.V.K. is located in Nabibagh, Berasia Road area of capital city of Bhopal. The institution is run under the supervision of Central Institute of Agriculture Engineering [C.I.A.E.], G.O.I. with Director as head of the institution. The farm area of the K.V.K. is 20 hectares, entirely cultivated and irrigated.  
[Para, 4.8]
- 1.13 Regarding budget allocation, the K.V.K. receives an average allocation of Rs. 31.35 lakh per year against which the average expenditure is around Rs. 29.21 lakh per annum.  
[Para, 4.10]

### RESULTS OF SURVEY – VILLAGE PARTICULARS

- 1.14 The total population of ten identified villages of **K.V.K., Bhopal** as per census, 2001 is 8778 constituting 2.59 percent to total rural population of district Bhopal. In all the ten identified villages the percentage of S.C. population is more than the S.T. population. The literacy rate that range between 52.60 percent in village Ratibad to 66.50 percent in village Kolukhedi is close to district percentage literacy level of 64.27 and state level of 64.11 percent.  
[Para, 4.39]
- 1.15 **The work participation rate** that ranged between 24.10 percent for village Kolukhedi to 56.40 percent for village Ratibad, is, in general, more among males than females. The proportion of non-workers that ranged between 43.10 percent in village Manikhedi Kot to 75.90 percent in village Kolukhedi, presents a dismal picture as it shows higher number of dependent population.  
[Para, 4.41]
- 1.16 In all the ten number of villages covered under the study, agriculture remains to be the **main occupation**. The proportion of cultivators to main workers is more than that of agriculture labour with preponderance of male cultivators over females. In case of agriculture labour, a reverse trend is true.  
[Para, 4.42, 4.43]
- 1.17 Regarding **land-use** the gross cropped area of identified ten number of villages is 83.59 percent of the total geographical area of ten number of villages. As regards irrigation the percentage of gross irrigated area to gross cropped area is 37.18 for ten identified villages which is more than the district average of 33.19 percent and state average of 28.54 percent.  
[Para 4.45, 4.46]
- 1.18 All the ten number of villages covered under the study are **electrified** with irregular power supply situation having 1464 number of pump sets energized which is 8.65 percent to total number of pump sets energized in Bhopal district, that stands at 16,923 for the year 1999-2000.  
[Para, 4.93]
- 1.19 The availability of the facility of **road infrastructure** in identified ten number of villages is satisfactory as they have fair weather roads within the villages and also the link roads to all weather roads.  
[Para, 4.93]
- 1.20 In all the identified ten villages the primary schools exist within the village limits.  
[Para, 4.93]
- 1.21 Against the total number of ten villages, 3 number of villages have **Sub-Health Centres** within the village while 4 villages have Sub-Health-Centres within 5 km limit and 3 villages have this facility at a distance of more than 5 kms.  
[Para, 4.93]

- 1.22 In all the ten number of sample villages one or the other **drinking water** source, mostly hand pumps is available.  
**[Para, 4.93]**

## **RESULTS OF SURVEY – HOUSEHOLD PARTICULARS**

### **MACRO DIMENSION**

- 1.23 Information from all the 1245 households residing in 10 number of sample villages has been collected with average size of the family of 7 persons.  
**[Para, 4.94, 4.97]**
- 1.24 There is preponderance of households from S.C. communities and O.B.Cs. that constitute 84.02 percent to total households.  
**[Para, 4.99]**
- 1.25 Against the total number of 1245 households, 1219 households belong to Hindu community constituting 97.91 percent to total households. Only 26 families are following the muslim religion.  
**[Para, 4.101]**
- 1.26 Agriculture is the main stay of the households residing in ten identified villages as 86.75 percent of households are engaged directly in agriculture, as main occupation.  
**[Para, 4.118]**
- 1.27 Only 18 number of households from adopted and cluster group of villages constituting 1.45 percent to total number of households are engaged in livestock activities as source of main occupation.  
**[Para, 4.118]**
- 1.28 Regarding average monthly income, 83.54 percent of the households are in the income range of Rs. 1001.00 and above per-month which indicates the affluence level of the area.  
**[Para, 4.118]**

### **RESULTS OF THE SURVEY – MICRO DIMENSION**

- 1.29 In this part of the write-up 25 percent of the households, i.e. 314, have been taken for detailed inquiry.  
**[Para, 4.119]**
- 1.30 Out of the total number of 1921 family members the males are 1044 [54.35 percent] while females are 877 [45.65 percent].  
**[Para, 4.121]**
- 1.31 The literacy percentage being 88.03 percent in sample area is amazingly high. The overall educational scenario that emerges shows the absorption capacity of the people of the sample area to adopt latest technology regarding agriculture imparted by K.V.K.  
**[Para, 4.135]**
- 1.32 The bulk of farming communities is from the category of farmers consisting of middle level and big cultivators constituting 72.26 percent to total of 359 persons pursuing main occupations that denotes feasibility to implement various technology related to agriculture.  
**[Para, 4.135]**

- 1.33 Regarding average monthly income 82.77 percent of family members are within the income range of Rs. 1001.00 and above per month which is obvious as most of the farmers are pursuing agriculture on viable manner.  
[Para, 4.135]

#### **IMPACT OF K.V.K.–VOCATIONAL TRAINING–ADOPTED AND CLUSTER VILLAGES**

- 1.34 Regarding yield per-hectare both for agronomical and horticultural crops the after training situations as compared to before training conditions are better that clearly shows the positive impact of vocational training imparted by the K.V.K.  
[Para, 4.189]
- 1.35 In case of crops like wheat, maize, gram, arhar, lentil, soybean and mustard the per-hectare yield in after training situations is more than average productivity prevailing both at district and state levels. The impact of the K.V.Ks. effort, thus, is evident.  
[Para, 4.189]
- 1.36 For important horticultural crops like tomato, brinjal and bhindi wherein the participation rate is 10.69 percent, 11.24 percent and 7.25 percent respectively, the per-hectare yield in after training situations is more than those prevailing in before training conditions thus vouching the positive impact of K.V.Ks. efforts.  
[Para, 4.189]
- 1.37 Livestock and dairying where the participation rate that ranged between 4.48 percent for improved breeding practices to 8.97 percent for milk production need some more effort to enhance the participation of the villagers.  
[Para, 4.189]
- 1.38 For home science activities the important constituents are preparation of pickles, bakery items, making of papad/badi etc. where though participation is limited but the things are picking-up giving a promise of better performance.  
[Para, 4.189]
- 1.39 Agro-forestry is yet another field where 32 number of households from six villages have taken advantage of vocational training programme.  
[Para 4.189]
- 1.40 Regarding watershed activities, 38 number of households that comes to 13.10 percent to total number of sample households have participated in the training relating to construction of soak-pits.  
[Para, 4.189]

#### **IMPACT OF K.V.K. – FRONT LINE DEMONSTRATIONS – ADOPTED AND CLUSTER VILLAGES**

- 1.41 Organisation of Front Line Demonstration has led to enhanced productivity in most of the agriculture and horticulture crops in after training situations as compared to before training conditions which are positive impacts of the efforts of Bhopal K.V.K.  
[Para, 4.219]
- 1.42 In cluster group of villages the performance is as good as adopted villages that shows the efforts of agriculture scientists have percolated to such villages through various forward linkages.  
[Para, 4.219]

- 1.43 For crops like wheat, gram, arhar, mustard and potato the number of front line demonstrations to the tune of 52,40,9,7 and 7 have been organised with per-hectare yields higher than those prevailing at district and state levels in after training situations.  
[Para, 4.219]

#### IMPACT OF K.V.K. – ON FARM TESTING

- 1.44 Regarding On Farm Testing also the per-hectare yield of all the agronomical and horticulture crops is higher in after training conditions as compared to before training situations showing the positive impact of K.V.Ks. effort.  
[Para, 4.241]
- 1.45 Major number of on farm testings have been organised for crops like wheat [14 numbers] gram [10 numbers], soybean [20 numbers], tomato [2 numbers], brinjal [3 numbers] and agro-forestry [2 numbers] with per-hectare yield of most of the crops higher than those prevailing both at district and state levels.  
[Para, 4.241]

#### STATUS OF ACTIVITIES IN CONTROL VILLAGE – MANIKHEDI KOT

- 1.46 The study has identified one control village i.e. Manikhedi-Kot with 15 sample households and 90 sample family members where there is no intervention of K.V.K. In the following table comparative information regarding performance in control village and adopted and cluster villages has been shown.  
[Para, 4.242]

Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	1971.00	2076.00	+105.00
2	Paddy	576.00	700.00	+124.00
3	Maize	1492.00	1975.00	+483.00
4	Jowar	596.00	1002.00	+406.00
<b>PULSES</b>				
5	Gram	1059.00	1252.00	+193.00
6	Arhar	1115.00	1455.00	+340.00
7	Lentil	811.00	1003.00	+192.00
<b>OIL SEEDS</b>				
8	Soybean	1127.00	1156.00	+29.00
9	Mustard	857.00	1216.00	+359.00
10	Linseed	457.00	-	-
<b>HORTICULTURE CROPS PER HECTARE YIELD – QUINTAL</b>				
11	Potato	100.00	181.00	+81.00
12	Onion	-	151.67	-
13	Tomato	-	178.44	-
14	Brinjal	100.00	197.00	+97.00
15	Chilly	160.00	201.00	+41
16	Bhindi	50.00	113.00	+63
17	Cucerbites	-	127.75	-
18	Spices	-	-	-
19	Papaya	-	200.50	-
20	Citrus	-	30.00	-



- 1.47 The conclusion that can be drawn from the above narration is that regarding agronomical and horticulture crop productivity, the performance of adopted and cluster villages, where there is intervention of K.V.K. is better than the performance of control village that shows the positive impact of K.V.Ks. efforts over the crop production.**  
**[Para, 4.256]**

## **RESULTS OF SURVEY – INDIVIDUAL PARTICULARS**

- 1.48 The reactions of the 25 percent of individuals taken from the family members of the 25 percent households have been recorded. The table below shows the details;

Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	761	188
2	Cluster Villages	1070	269
3	Control Village	90	23
	<b>Total</b>	<b>1921</b>	<b>480</b>

**[Para, 4.268]**

Individual Particulars - Adopted and Cluster Villagers

- 1.49 The criteria for selection of individuals are - the individual should be the adult member of the family, he should be associated with any programme of K.V.K., he should be literate – may be without having any formal education. These criteria are common for all the six K.V.Ks. covered under the study.**  
**[Para, 4.323]**
- 1.50 The bulk of 360 individuals are from O.B.C. group that accounts for 78.77 percent to total number of 457 individuals.  
**[Para, 4.323]**
- 1.51 The cent-percent awareness about the services rendered by the K.V.K. is a positive indication.  
**[Para, 4.323]**
- 1.52 The regular contact of 98.47 percent of individuals is an achievement of K.V.K.**  
**[Para, 4.323]**
- 1.53 Regarding level of satisfaction of individuals about the services of K.V.K., agronomy, home science, agro-forestry, watershed and horticulture are the areas of maximum satisfaction.**  
**[Para, 4.323]**
- 1.54 Regarding impact of K.V.K. activities over income enhancement, 447 individuals, which is 97.81 percent to total of 457 individuals have reported agronomy as the main source of income enhancement.**  
**[Para, 4.323]**
- 1.55 As regards continuance of the services of K.V.K., 444 individuals [96.16 percent to total of 457 individuals] have reported in favour of the continuance of the services rendered by the K.V.K.**  
**[Para, 4.323]**

- 1.56** It is worth considering to incorporate in the mandate of the K.V.K., the subjects like production of by-products and development of marketing strategy of the products of the cultivators.  
[Para, 4.323]
- 1.57** Regarding impact of income enhancement, 84.63 percent, 96.72 percent and 38.07 percent individuals to total of 457 individuals respectively have reported positive impact over education, health status and housing conditions respectively.  
[Para, 4.323]

#### **INDIVIDUAL PARTICULARS – CONTROL VILLAGE**

- 1.58** The majority of individuals i.e. 95.65 percent to total of 23 individuals are from the community of O.B.C.  
[Para, 4.340]
- 1.59** Regarding satisfaction level of per-hectare yield of agronomical and horticulture produce, only 4.35 percent individuals are satisfied with the present level of per-hectare yield against the level of satisfaction of 96.28 percent individuals in case of adopted/cluster villages.  
[Para, 4.340]
- 1.60** Regarding elementary level of education 56.62 percent individuals have reported that their male wards attend the school while for female wards 47.83 percent individuals have reported for their school attendance.  
[Para, 4.340]
- 1.61** A very satisfactory level of health scenario is existing in the control village.  
[Para, 4.340]
- 1.62** Regarding housing facilities, the individual of control village have shown interest in construction of semi pucca houses, pucca houses and separate cattle shed.  
[Para, 4.340]

## KRISHI VIGYAN KENDRA, INDORE

- 1.63 Established in the year 1976, the K.V.K. is located in the Kasturbagram area of Indore. It is being run by an N.G.O. headed by the Secretary of the Organisation as Chief of the K.V.K. having nine number of technical staff and six number of non-technical staff. The farm area of the K.V.K. is 20 hectares which is entirely cultivated with irrigated and unirrigated areas of 15 hecets and 5 hecets respectively. The K.V.K. has got no administrative building of its own.  
**[Para, 5.6]**
- 1.64 The K.V.K. receives an average allocation of Rs. 22.51 lakh per year over the years 2001-2002 to 2003-2004 against which the average expenditure per-year is Rs. 17.06 lakh.  
**[Para, 5.9]**

### RESULTS OF SURVEY – VILLAGE PARTICULARS

- 1.65 The total population of ten identified villages of **K.V.K., Indore**, as per census, 2001 is 6139 which is 0.84 percent of the total rural population of district Indore. In villages like Indira Gram [adopted village], Bari Kalmer [cluster village], Jagjivan Gram [cluster village] and Nehru Van Gram [cluster village] the percentage of S.C. population is more than that of S.T. population while in rest of villages a reverse trend is prevailing. The literacy rate that ranged between 24.5 percent for village Menda – a predominantly tribal village, to 57.8 percent for village Bercha [control village] is lower than both district and state level per-centage literacy of 74.82 and 64.11 respectively.  
**[Para, 5.31]**
- 1.66 **The work participation rate** that ranged between 44.9 percent for village Jagjeevan Gram to 61.4 percent for village Bari Kalmer [cluster village] with, more or less, similar participation rate between male and female is indicative of the awareness and intent of the female population residing in our area of study to contribute meaningfully towards household income. The proportion of non-workers that ranged between 38.6 percent for village Bari Kalmer [cluster village] to 55.1 percent for village Jagjeevan Gram [cluster village] presents a dismal picture as it shows the higher number of dependent population.  
**[Para, 5.33]**
- 1.67 Agriculture remains to be the main occupation of the ten villages identified for the study. Out of ten villages, in five number of villages viz. Indira Gram, Bari Kalmer, Nehru Van Gram, Mendal and Bercha, the proportion of female cultivators is more then that of male cultivators that signifies the awareness and intent of the female members of the farming community to work along with their male counterpart for addition in household income. Regarding proportion of agriculture labour to total workers, that ranged between 18..2 percent for village Mendal [cluster village] to 73.9 percent for village Bercha [control village], the involvement of female participation is more than males.  
**[Para, 5.35]**
- 1.68 Regarding land-use the gross cropped area of the identified ten villages is 83.30 percent to total geographical area. As regards irrigation, the percentage of gross area irrigated to gross cropped area is 54.23 for ten number of identified villages covered under the study which is more than the district average of 36.70 percent and state average of 28.54 percent.  
**[Para 5.40, 5.41]**
- 1.69 All the villages covered under the study are electrified with irregular power supply situation. The total number of pump-sets energized is 754 which is 1.71 percent to total number of 44132 pump sets energized in district, Indore in the year 1999-2000.  
**[Para, 5.44, 5.46]**

- 1.70 The situation of availability of road network in the sample area of the study is not satisfactory as in non of the villages even the fair weather roads exist.  
[Para, 5.83]
- 1.71 Every village has primary school within the physical limits of the village.  
[Para, 5.83]
- 1.72 Only in village Bari Kalmer [cluster village] **Sub-Health Centre** within the geographical limits of the village exists, while in 8 number of villages [all from adopted and cluster groups] this facility is located within 5 km distance from the village.  
[Para, 5.83]
- 1.73 In all the ten number of sample villages one or the other **drinking water** source, mostly hand pumps is available.  
[Para, 5.83]

## RESULTS OF SURVEY – HOUSEHOLD PARTICULARS

### MACRO DIMENSION

- 1.74 The total number of household as per survey is 861 for all the ten identified villages with average size of the family of seven persons.  
[Para, 5.87]
- 1.75 There is preponderance of S.C. and S.T. households, the combined percentage of which is 79.21 to total number of 861 households which underlines one important fact that vulnerable communities in our sample villages are pursuing the agriculture occupation on viable scale.  
[Para, 5.89]
- 1.76 All the households in our area of study belong to Hindu religion.  
[Para, 5.91]
- 1.77 Agriculture remains to be the main occupation of the households of all the sample villages as out of total number of 861 number of households 724 number of households constituting 84.09 percent to total households are engaged directly in agriculture as main occupation.  
[Para, 5.93]
- 1.78 Only marginal number of 20 households [2.32 percent] are pursuing livestock activities as their main occupation.  
[Para, 5.109]
- 1.79 Regarding average monthly income the combined number of households within the income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above per-month is 815 which is 94.66 percent to total households, indicating overall affluence level of the area.  
[Para, 5.109]

### RESULTS OF THE SURVEY – MICRO DIMENSION

- 1.80 In this part of the write-up 25 percent of the households have been identified for the detailed inquiry which comes to 214..  
[Para, 5.110]
- 1.81 Out of the total number of 1185 number of family members from 214 households, males constitute 52.74 percent while females constitute 47.26 percent.  
[Para, 5.112]

- 1.82 The literacy percentage against the total of 1185 persons is 67.08 which is lower than the district average of 74.82 percent but higher than state average of 64.11 percent as per census 2001. The overall educational status that emerges justifies the absorption capacity of the people of the sample area to adopt technology regarding agriculture introduced particularly by the K.V.K.  
[Para, 5.114]
- 1.83 The bulk of farming community consists of farmers and small farmers constituting 79.85 percent percent to total number of persons pursuing various main occupations that indicates the feasibility to implement various technology related to agriculture.  
[Para, 5.134]
- 1.84 The near absence of activities relating to allied spheres of agriculture is not very uncommon in our area of study, as generally in rural areas such activities, particularly animal rearing is pursued on a very limited scale.  
[Para, 5.134]
- 1.85 Regarding average monthly income, 78.82 percent family members against the 1185 persons are within the income range of Rs. 1001.00 and above per-month that shows the affluence level of the area to some extent.  
[Para, 1.134]

#### **IMPACT OF K.V.K.–VOCATIONAL TRAINING – ADOPTED AND CLUSTER VILLAGES**

- 1.86 Regarding the yield per-hectare for both agronomical and horticultural crops the performance in after training situations is better than before training conditions that clearly shows the positive impact of vocational training imparted by the K.V.K.  
[Para, 5.184]
- 1.87 In case of crops like wheat, maize, gram, arhar, lentil, soybean and mustard the per-hectare yield in after training situations is more than the average productivity prevailing both at district and state levels. The impact of the K.V.Ks. effort, thus, is evident.  
[Para, 5.184]
- 1.88 For important horticultural crops like potato, onion, tomato, brinjal and bhindi where the participation rate is 9.14 percent, 5.08 percent, 15.74 percent, 12.69 percent and 9.64 percent households respectively, the per-hectare yield in after training situations is more than those prevailing in before training conditions, thus, indicating the positive impact of K.V.K.  
[Para, 5.184]
- 1.89 A total of only 8 number of households have taken part in various activities relating to livestock and dairying with hardly any performance in after training situations.  
[Para, 5.184]
- 1.90 For home science activities, the important constituents are preparation of pickles and papad/badi/jam/jelly etc. wherein 96.45 percent and 75.63 percent households respectively have participated in vocational training with good performance in after training conditions.  
[Para, 5.184]
- 1.91 No vocational trainings have been organised on subjects like poultry and fishery development, training of rural youth, agro-forestry and watershed activities which are important functions from the view point of income augmentation in rural areas.  
[Para, 5.184]

## **IMPACT OF K.V.K. – FRONT LINE DEMONSTRATIONS – ADOPTED AND CLUSTER VILLAGES**

- 1.92 Front Line Demonstrations have lead to enhancement in productivity of most of agronomical and horticulture crops in after training situations as compared to before training conditions which shows the positive impact of K.V.Ks. efforts.  
[Para, 5.201]**
- 1.93 For crops like wheat, maize, gram and soybean the number of front line demonstrations organised are 33, 1, 12 and 23 respectively with per-hectare yield more than the productivity prevailing at district and state levels in after training situations.  
[Para, 5.201]**
- 1.94 Regarding horticultural crops like tomato, brinjal chilly, bhindi and cucerbites for which 12,8,3,1,1 number respectively of F.L.Ds. have been organised with better performance in after training situations leading to higher yield per-hectare in after training situations as compared to before training conditions.  
[Para, 5.201]**
- 1.95 Since no F.L.Ds. have been organised on subjects like livestock and dairying, poultry, fishery development, agro-forestry, organic farming and watershed activities, the impact of F.L.D. for these subjects will not be visible.  
[Para, 5.201]**

## **IMPACT OF K.V.K. – ON FARM TESTING – ADOPTED AND CLUSTER VILLAGES**

- 1.96 In case of On Farm Testing [O.F.T.] also the per-hectare yield of all the agronomical and horticultural crops is higher in after training conditions as compared to before training situations showing the positive impact of K.V.Ks. efforts.  
[Para, 5.214]**
- 1.97 The O.F.Ts. have been organised only in adopted villages where as a few O.F.Ts. should have been organised in cluster villages also to have wider impact.  
[Para, 5.214]**
- 1.98 No. O.F.Ts. have been organised for any of the horticulture crops which certainly shows the deficiency in performance.  
[Para, 5.214]**
- 1.99 Since no O.F.Ts. have been organised on subjects like livestock and dairying, poultry, fishery development, agro-forestry, organic farming and watershed activities, the impact of O.F.T. relating to such subjects will not be visible.  
[Para, 5.214]**

## **STATUS OF ACTIVITIES IN CONTROL VILLAGE – BERCHA**

- 1.100 The study has identified one control village i.e. Bercha with 17 number of sample households and 85 sample family members where there is no intervention of K.V.K. In the following table comparative information regarding performance in control village and adopted and cluster villages has been shown.  
[Para, 5.215]**

**Comparative Status of Performance Among Control Village and Adopted and Cluster Villages**

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3294.00	3993.22	(+) 699.22
2	Maize	1688.00	2344.00	(+) 656.00
3	Jowar	738.00	1806.75	(+) 1068.75
<b>PULSES</b>				
4	Gram	1005.00	1093.89	(+) 88.89
5	Arhar	1038.00	1542.80	(+) 504.80
6	Lentil	-	1005.00	-
<b>OIL SEEDS</b>				
7	Soybean	1091.00	1180.22	(+) 89.22
8	Mustard	-	1700.00	-
<b>HORTICULTURE CROPS – QUINTAL</b>				
9	Potato	197.00	284.50	(+) 87.50
10	Onion	197.00	261.67	(+) 64.67
11	Tomato	164.00	228.13	(+) 64.13
12	Brinjal	183.00	220.63	(+) 37.63
13	Chilly	-	252.50	-
14	Bhindi	100.00	162.50	(+) 62.50
15	Cucerbites	85	-	-

**1.101 The information clearly shows the better performance in adopted and cluster villages with interference of K.V.K. as compared to control village. For all crops, the per-hectare yields, due to training efforts of K.V.K. are more than the per-hectare yield of control village. [Para, 5.216]**

**RESULTS OF SURVEY – INDIVIDUAL PARTICULARS**

1.102 The reactions of the 25 percent of individuals taken from the family members of the 25 percent households have been recorded. The table below shows the details;

Basic Details			
Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	359	91
2	Cluster Villages	741	184
3	Control Village	85	21
	<b>Total</b>	<b>1185</b>	<b>296</b>

[Para, 5.219]

Individual Particulars - Adopted and Cluster Villagers

**1.103 The majority of 123 individuals are from the S.T. community that accounts for 44.73 percent to total of 275 individuals from adopted and cluster villages with cent-percent individuals as followers of Hindu religion. [Para, 5.278]**

**1.104 The cent-percent awareness of individuals about the services rendered by the K.V.K. is an important achievement. [Para, 5.278]**

- 1.105 The absence of knowledge of sufficient number of individuals regarding F.L.D. and O.F.T. is some what discouraging.  
[Para, 5.278]**
- 1.106 Regarding regular contact with K.V.K., the survey results show the regular contact of 71.64 percent individuals mainly because of desire for adopting new technology and for obtaining quality seed.  
[Para, 5.278]**
- 1.107 Out of 275 individuals, 270 individuals have implemented the services of K.V.K. which is 98.18 percent to total respondents, which, in itself, is an achievement of K.V.K.**
- 1.108 Home science, agronomy and horticulture are the subjects for which satisfaction level is substantial. In subjects like animal husbandry, fishery, poultry, organic farming, watershed activities and training of rural youth the satisfaction level is nil, because of the basic fact that for these subjects no vocational training in tangible way has been imparted nor the F.L.Ds. or O.F.Ts. have been organised.  
[Para, 5.278]**
- 1.109 Cent-percent positive response regarding impact of K.V.K. services over income enhancement has been reported which is of credit to the various efforts of K.V.K.  
[Para, 5.278]**
- 1.110 Out of 275 individuals, 268 individuals [97.45 percent] have reported for the continuance of the services of K.V.K. particularly for subjects like agronomy and horticulture which again shows the positive impact of the services rendered by K.V.K.  
[Para, 5.278]**
- 1.111 Regarding suggestions for additional services to be rendered by K.V.K., the sample individuals have given useful suggestions regarding introduction of production of by-products of crops and development of marketing strategy for fair return of the product for incorporation in the mandates of K.V.K.  
[Para, 5.278]**
- 1.112 Regarding impact of income enhancement, 76.63 percent, 95.64 percent, 43.27 percent individuals to total of 275 individuals respectively have reported positive impact over levels of education, health and housing conditions respectively.  
[Para, 5.278]**

#### **INDIVIDUAL PARTICULARS – CONTROL VILLAGE**

- 1.113 The majority of individuals i.e. 95.24 percent to total of 21 sample individuals are from S.T. community. Cent percent individuals are followers of Hindu religion.  
[Para, 5.294]**
- 1.114 The cent-percent level of unawareness among sample individuals of control village about the existence of K.V.K. is a matter of concern.  
[Para, 5.294]**
- 1.115 Regarding satisfaction level of per-hectare yield of agronomical and horticultural crops, the cent-percent individuals of control village have expressed their dissatisfaction with suggestions to organize training activities on water conservation methods, application of agriculture inputs and crop rotation.  
[Para, 5.294]**



- 1.116 Regarding elementary level of education 52.38 percent individuals have reported that their male wards attend the school, where as for female wards 61.90 percent individuals have reported in favour of school attendance.  
[Para, 5.294]**
- 1.117 A very satisfactory level of health scenario is existing in control village wherein most of the basic health parameters, the percentage positive response is much higher than the responses from adopted and cluster villages.  
[Para, 5.294]**
- 1.118 Hand pumps are the main source of drinking water in our control village where 95.24 percent individuals have reported for its existence.  
[Para, 5.294]**
- 1.119 Regarding housing facilities, the individuals of control village have shown interest in constructing semi-pucca houses.**

## KRISHI VIGYAN KENDRA, CHHINDWARA

- 1.120 Established in the year 1983, the K.V.K. is located in the Chandangaon area of Chhindwara district. The institution is being run under the overall control of Jawahar Lal Nehru Krishi Vishwa Vidyalaya [J.N.K.V.V.], Jabalpur with training organiser as head of the institute with 8 number of technical staff and 3 number of non-technical staff. The farm area of the K.V.K. is 20 hectares, entirely irrigated and cultivated. The K.V.K. has its own administrative building.  
**[Para, 6.9, 6.10]**
- 1.121 Regarding budget provision, during the year 2003-2004 the K.V.K. has received an allocation of Rs. 28.45 lakh with expenditure of entire amount.  
**[Para, 6.15]**

### RESULTS OF SURVEY – VILLAGE PARTICULARS

- 1.122 The total population of ten identified villages as per census, 2001 is 8029 which is 0.57 percent to total rural population of district Chhindwara. Out of the ten identified villages, in seven number of villages viz. Moadai, Lahgurua, Omariya, Munga, Baranga, Oseria and Pipariya Birsa the percentage of S.T. population is much more than percentage of S.C. population. The literacy rate that ranged between 57.6 percent for village, Baranga [cluster village] to 86.6 percent for village Simriya Kalan [adopted village] is close to the district percentage literacy level of 66.03 and state percentage literacy level of 64.11, thus defying one of the fixed notions that areas with substantial tribal population usually have low literacy rate.  
**[Para, 6.37]**
- 1.123 **The work participation rate** that ranged between 35.1 percent in village Baranga [cluster village] to 56.1 percent for village Char-Gaon-Bhat [cluster village] is in general more among males than females except for village Omariya [cluster village] where a reverse trend is visible. For all the ten identified villages the proportion of female marginal workers is more than that of males which is rather obvious as the females do odd jobs in their spare time. Regarding non-workers that ranged between 43.9 percent in village Char-Gaon-Bhat [cluster village] to 64.9 percent in village Baranga [cluster village] presents a dismal picture as it shows higher percentage of dependent population.  
**[Para, 6.39]**
- 1.124 **Agriculture is the main occupation** of the ten number of identified villages covered under the study as the combined average percentage of cultivators and agriculture labour is 81.3 to total workers. In general the proportion of male cultivators to total workers is more than that of females except in village Simariyan Kalan where percentage of female cultivators is 60.4 as against 52.1 percent of male cultivators. In case of agriculture labour, the percentage of female participation, in general, is more than male participation, which, seems natural as in villages with substantial tribal population where the work culture among the females is very common, at times more than even males. The proportion of household workers to total workers is far from being satisfactory that ranged between 0.9 percent in village Omariya to 4.6 percent in village Munga. One of the important causes of rural poverty is absence of secondary occupation which give household income support particularly in an agrarian economy.  
**[Para, 6.41]**
- 1.125 Regarding land-use the percentage of gross cropped area of the ten identified villages is 85.32 percent to total geographical area. As regards irrigation, the percentage of gross area irrigated to gross cropped area is 35.76 which is more than the district and state average figures of 22.51 percent and 28.54 percent respectively.  
**[Para, 6.87]**

- 1.126 All the ten number of villages covered under the study are electrified with irregular power supply positions. The total number of pump sets energized is 482 which is 0.75 percent to total number of pump sets energized for district Chhindwara that stands at 64584 in the year 1999-2000.  
**[Para, 6.87]**
- 1.127 The status of availability of road infrastructure in ten identified villages covered under the study is satisfactory.  
**[Para, 6.87]**
- 1.128 With the exception of the village Char-Gaon-Bhat where the primary school is located at a distance of 3 kms., in rest of nine number of villages the facility of primary school is available within the village periphery.  
**[Para, 6.87]**
- 1.129 Though non of the villages have Sub-Health-Centres within the village limits, but is located within reachable distance ranging between one to three kms. Similar is the situation with location of facility regarding Rural Family Welfare Centres.  
**[Para, 6.87]**
- 1.130 In all the ten number of sample villages one or the other **drinking water** source, mostly hand pumps are available.  
**[Para, 6.87]**

## **RESULTS OF SURVEY – HOUSEHOLD PARTICULARS**

### **MACRO DIMENSION**

- 1.131 The total number of household as on the date of the survey is 907 for all the ten number of villages covered under the study with average family size of nine persons.  
**[Para, 6.91]**
- 1.132 There is preponderance of households from S.C., S.T. and O.B.C. communities that constitute 84.34 percent to total number of 907 households.  
**[Para, 6.93]**
- 1.133 Against the total of 907 households, 906 households are the followers of Hindu religion while only one household is the follower of Muslim religion.  
**[Para, 6.95]**
- 1.134 Agriculture remains to be the main occupation of the households of all the sample villages as out of total number of 907 households, 819 number of households are engaged directly in agriculture accounting for 90.30 percent to total number of households.  
**[Para, 6.98]**
- 1.135 The complete absence of secondary sector activities among sample households is indicative of the fact that inhabitants of the sample villages have to fall back on agriculture for earning livelihood which at times compel them to migrate to nearby areas having job opportunities.  
**[Para, 6.114]**
- 1.136 The total number of households in the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is 896 which is 98.79 percent to total number of households indicating the affluence level of the area.  
**[Para, 6.114]**

## **RESULTS OF THE SURVEY – MICRO DIMENSION**

- 1.137 In this section of write-up, 25 percent of households have been identified for detailed enquiry which comes to 224.  
**[Para, 6.115]**
- 1.138 Out of the total number of 1278 family members, the males are 663, constituting 51.88 percent to total family members, while for females, this percentage is 48.12.  
**[Para, 6.117]**
- 1.139 The literacy percentage being 78.25 in the sample area is amazingly high that indicates the absorption capacity of the individuals to adopt latest technology regarding agriculture imparted by the K.V.K.  
**[Para, 6.135]**
- 1.140 The complete absence of occupations relating to activities allied to agriculture [as main occupation] in our area of study is somewhat discouraging.  
**[Para, 6.135]**
- 1.141 Regarding average monthly income 81.22 percent family members are within the average monthly income range of Rs. 1001.00 and above.  
**[Para, 6.135]**

## **IMPACT OF K.V.K.–VOCATIONAL TRAINING – ADOPTED AND CLUSTER VILLAGES**

- 1.142 **Regarding the yield per-hectare for both agronomical and horticultural crops, the after training status as compared to before training conditions are better that clearly shows the positive impact of vocational training imparted by K.V.K.**  
**[Para, 6.189]**
- 1.143 **In case of crops like wheat, paddy, maize, gram, arhar, lentil, soybean, mustard and linseed the per-hectare yield in after training situations is more than the average productivity prevailing both at district and state levels. The impact of the K.V.Ks. effort, thus, is evident.**  
**[Para, 6.189]**
- 1.144 **For important horticultural crops like potato, tomato, and brinjal wherein 69.19 percent, 18.48 percent and 8.53 percent family representatives respectively have responded to the vocational training programmes, the per-hectare yield in after training conditions is better than before training situations.**  
**[Para, 6.189]**
- 1.145 **The participation rate of villagers in the training courses related to livestock and dairying is hardly meaningful which requires intensive efforts to popularize such activities.**  
**[Para, 6.189]**
- 1.146 **For home science, the important constituents are preparation of pickles and papad/badi/jam/jelly etc. which have immense scope in our area of study.**  
**[Para, 6.189]**
- 1.147 **The activities like organic farming and bio-pesticides are getting popular in our area of study as 18.01 percent and 3.79 percent households respectively have shown interest in such activities.**  
**[Para, 6.189]**

**1.148 No vocational trainings have been organised for subjects like poultry, fishery, training of rural youth and watershed activities.  
[Para, 6.189]**

#### **IMPACT OF K.V.K. – FRONT LINE DEMONSTRATIONS – ADOPTED AND CLUSTER VILLAGES**

**1.149 Front Line Demonstrations organised in our area of study has lead to enhancement in productivity of most of the agronomical and horticulture crops in after training situations as compared to before training conditions.  
[Para, 6.207]**

**1.150 Regarding crops like wheat, gram, arhar, soybean the number of F.L.Ds. organised are 15,3,1 and 3 respectively with better performance in after training situations as compared to per-hectare yield prevailing both at district and state levels.  
[Para, 6.207]**

**1.151 Regarding horticulture crops like potato, tomato, brinjal, chilly and papaya crops, very marginal number of F.L.Ds. have been organised with very little tangible results.  
[Para, 6.207]**

**1.152 Since no F.L.Ds. have been organised on subjects like livestock and dairying, poultry, fishery development, organic farming and watershed activities, the impact of F.L.D. on these subjects will not be visible.  
[Para, 6.207]**

#### **IMPACT OF K.V.K. – ON FARM TESTING – ADOPTED AND CLUSTER VILLAGES**

**1.153 In case of On Farm Testing [O.F.T.], the yield per hectare in after training situations is more than before training conditions as has happened for both vocational training and front line demonstrations which shows the positive impact of K.V.Ks. efforts.  
[Para, 6.215]**

**1.154 The overall performance regarding organizing O.F.Ts. is some what sketchy. Whatever O.F.Ts. have been organised are mostly limited to only adopted villages, disregarding cluster villages which are the main forward linkages for adoption of agriculture related technology.  
[Para, 6.215]**

#### **STATUS OF ACTIVITIES IN CONTROL VILLAGE – PIPARIYA BIRSA**

**1.155 The study has identified one control village i.e. Pipariya Birsa with 14 number of households and 71 number of sample family members where there is no intervention of K.V.K. In the following table comparative information regarding performance in control village and adopted and cluster villages has been shown;  
[Para, 6.216]**

**Comparative Status of Performance Among Control Village and Adopted and Cluster Villages**

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3850	4014	(+) 164
2	Paddy	2200	2433	(+) 233
3	Maize	2264	2287	(+) 23
4	Jowar	1045	1097	(+) 52
<b>PULSES</b>				
5	Gram	1500	2087	(+) 587
6	Arhar	1200	1455	(+) 255
7	Lentil	750	761	(+) 11
<b>OIL SEEDS</b>				
8	Soybean	1569	2198	(+) 629
9	Mustard	1000	1521	(+) 521
10	Linseed	1000	2486	(+) 1486
<b>HORTICULTURE CROPS – QUINTAL</b>				
11	Potato	287	316	(+) 25
12	Onion	203	252	(+) 49
13	Tomato	219	228	(+) 9
14	Brinjal	240	247	(+) 7
15	Chilly	176	183	(+) 7
16	Bhindi	100	155	(+) 5
17	Cucurbits	-	142	-
18	Spices	100	130	(+) 30
19	Papaya	120	198	(+) 78
20	Citrus	-	148	-

**1.156** The above table shows that except for the crops like wheat, paddy, gram, arhar, soybean, mustard and linseed when the per-hectare yield for adopted and cluster villages is substantially high as compared to that prevailing in control village, for rest of the crops the difference in per-hectare yield is not much between adopted and cluster villages on one side and the control village on other side. This shows that district as a whole has conducive conditions for agricultural activities.  
[Para, 6.217]

**RESULTS OF SURVEY – INDIVIDUAL PARTICULARS**

1.157 The reactions of the 25 percent of individuals taken from the family members of the 25 percent households have been recorded. The table below shows the details;

Basic Details			
Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	464	116
2	Cluster Villages	743	185
3	Control Village	71	18
	<b>Total</b>	<b>1278</b>	<b>319</b>

[Para, 6.220]

Individual Particulars - Adopted and Cluster Villagers

- 1.158 The majority of 231 individuals are from the O.B.C. community that accounts for 76.74 percent to total of 301 individuals from adopted and cluster villages with cent percent individuals as followers of Hindu religion.  
[Para, 6.267]
- 1.159 The cent-percent awareness of individuals about the K.V.K. in terms of its location and more importantly the services rendered by it is an important achievement of K.V.K.  
[Para, 6.267]
- 1.160 Regarding regular contact with K.V.K., 78.41 percent individuals have regular contact because of desire for adopting new technology and for obtaining quality seed.  
[Para, 6.267]
- 1.161 Out of 301 individuals, 241 individuals have implemented the services of K.V.K. which is 80.07 percent to total respondents which in itself is an achievements of K.V.Ks. efforts.  
[Para, 6.267]
- 1.162 In the field of agronomy maximum number of 235 individuals [78.07 percent to total of 301 individuals] have implemented the improved techniques, followed by 25 individuals [8.31 percent] for organic farming and 4 individuals implementing the techniques regarding agro-forestry.  
[Para, 6.267]
- 1.163 Regarding subjects like animal husbandry, fishery, poultry and training of rural youth not much implementation efforts have been made by sample individuals as for these activities vocational trainings have hardly been organised.  
[Para, 6.267]
- 1.164 About 99 percent positive response regarding impact of K.V.K. services over income enhancement has been reported which is of credit to the efforts of K.V.K. in various fields of its operation.  
[Para, 6.267]
- 1.165 Out of 301 individuals, 296 individuals [98.34 percent] have reported for the continuance of the services of K.V.K., particularly for subjects like agronomy and horticulture.  
[Para, 6.267]
- 1.166 Regarding suggestions for additional services to be rendered by K.V.K., the sample individuals have given useful suggestions regarding introduction of production of by-products of crops and development of marketing strategy for fair return of the product for incorporation in the mandates of K.V.K.  
[Para, 6.267]
- 1.167 Regarding impact of income enhancement, 92.36 percent, 96.01 percent and 40.53 percent individuals to total of 301 individuals respectively have reported positive impact over levels of education, health and housing conditions respectively.  
[Para, 6.267]

#### **INDIVIDUAL PARTICULARS – CONTROL VILLAGE**

- 1.168 The majority of individuals i.e. 55.56 percent to total of 18 sample individuals are followers of Hindu religion.  
[Para, 6.294]
- 1.169 The cent-percent level of unawareness among sample individuals of control village about the services rendered by the K.V.K. is a matter of concern.  
[Para, 6.294]

- 1.170 Regarding satisfaction level of per-hectare yield of agronomical and horticultural crops, the 17 number of individuals out of the total of 18 sample individuals have expressed their dissatisfaction with suggestions to organize training activities on water conservation methods and application of agriculture inputs.  
**[Para, 6.294]**
- 1.171 Regarding elementary level of education, 50.00 percent individuals have reported their male wards attending the school, where as for female wards 38.89 percent individuals have reported in favour of school attendance.  
**[Para, 6.294]**
- 1.172 A very satisfactory level of health scenario is existing in control village wherein most of the basic health parameters, the percentage positive response is much higher than the responses from adopted and cluster villages.  
**[Para, 6.294]**
- 1.173 Hand pumps are the main source of drinking water in our control village where cent-percent individuals have reported for its existence.  
**[Para, 6.294]**
- 1.174 Regarding housing facilities, the individuals of control village have shown interest in constructing semi-pucca houses.  
**[Para, 6.294]**



## KRISHI VIGYAN KENDRA, SATNA

1.175 Established in the year 1992, the K.V.K. is located in the Maghawan Development Block of Satna district. It is being run by an N.G.O. with Training Organiser as chief of the K.V.K. having nine number of technical staff and six number of non-technical staff. The farm area of the K.V.K. is 25 hect. Out of which 15 hectares are cultivated with 7 hectares of irrigated area. The K.V.K. has got the administrative building of its own.

**[Para, 7.5]**

1.176 The K.V.K. receives an average allocation of Rs. 51.41 lakh per-year over the years 2001-2002 to 2003-2004, against which the average expenditure per-year is 52.05 lakh.

**[Para, 7.8]**

### RESULTS OF SURVEY – VILLAGE PARTICULARS

1.177 The total population of ten identified villages as per census, 2001 is 4121 which is 0.28 percent to total rural population of district Satna. In all the ten identified villages the proportion of S.T. population is more than that of S.C. population. The literacy rate ranged between 28.9 percent for village Umariha to 68.8 percent for village Devlaha, not far below the district level percentage literacy of 65.12 and state level figure of 64.11. The The average size of the family is five persons.

**[Para, 7.29]**

1.178 **The work participation rate** that ranged between 32.6 percent for village Patni [cluster village] to 55.06 percent for village Tangi [cluster village] with similar participation rate between male and female [with the exception of village Umariha and Patni] which is a positive indication showing awareness and intent of female population, residing in our sample area to contribute meaningfully towards household income. The proportion of non-workers that ranged between 50.4 percent for village Rahaniya [cluster village] to 71.1 percent for village Umariya [cluster village] presents a dismal picture as it shows larger extent of dependent population.

**[Para, 7.31]**

1.179 Agriculture remains to be the main occupation of the ten identified villages covered under the study. The proportion of cultivators to total workers ranged between 20.00 percent for village Khodari [adopted village] to 91.7 percent for village Bhargawan [control village] with male participation usually more than females except for the villages Khodari [adopted village] and Devlaha [adopted village] where a reverse trend is true. In case of proportion of agriculture labour to total workers that ranged between 3.4 percent for village Bhargawan [control village] to 72.3 percent for village Rahaniya [cluster village] the involvement of female participation, in general, is more than that of males. The situation regarding proportion of workers in household industries to total workers is far from being satisfactory as it ranged between 0.2 percent for village Devlaha [adopted village] to 2.1 percent for village Patni [cluster village]. One of the important factors of rural poverty is absence of such occupations that encourage migration during lean season of agriculture.

**[Para, 7.33,7.34,7.35]**

1.180 Regarding land-use the gross cropped area of the ten identified villages is 2392 hectares which is 27.69 percent to total geographical area. As regards irrigation, the percentage of gross area irrigated to gross cropped area is 7.19 which is much less than district average of 23.27 percent and state average of 28.54 percent.

1.181 All the villages covered under the study are electrified with irregular power supply situation. The total number of pump sets energized is 88 which is 0.43 percent to total number of 20375 pump sets energized in district Satna in the year 1999-2000.

**[Para, 7.78]**

- 1.182 The status of road infrastructure in identified 10 number of villages is fairly satisfactory.  
[Para, 7.78]
- 1.183 Regarding education, the existence of primary schools within the geographical limits of all the ten number of villages covered under the study is encouraging.  
[Para, 7.78]
- 1.184 Regarding health scenario, in non of the identified ten number of villages the facilities like sub-health-centre, rural family welfare centre, government hospitals and dispensaries, private clinics and nursing homes exist within village or their nearby limits.  
[Para, 7.78]
- 1.185 In all the ten number of sample villages one or the other **drinking water** source, mostly hand pumps, is available.  
[Para, 7.78]

## RESULTS OF SURVEY – HOUSEHOLD PARTICULARS

### MACRO DIMENSION

- 1.186 The total number of household as per survey is 349 for all the ten identified villages covered under the study with average family size of 11 persons.  
[Para, 7.82]
- 1.187 There is preponderance of S.T. and S.C households, the combined percentage of which is 87.97 to total number of 349 households which underlines one important fact that the vulnerable communities in our sample villages are pursuing agriculture occupation in viable manner.  
[Para, 7.84]
- 1.188 All the households in our area of study belong to Hindu religion.  
[Para, 7.86]
- 1.189 Agriculture remains to be the main occupation as out of total number of 349 households, 301 number of households constituting 86.25 percent to total households are engaged directly in agriculture as their main occupation.  
[Para, 7.88]
- 1.190 In non of the villages secondary and tertiary sector occupations are being pursued as main occupation.  
[Para, 7.103]
- 1.191 Regarding income level, 91.40 percent households are within the average monthly income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above with similar trend of monthly expenditure that shows overall affluence status of the area.  
[Para, 7.103]

### RESULTS OF THE SURVEY – MICRO DIMENSION

- 1.192 In this section of write-up, 25 percent of the households have been selected for detailed enquiry which comes to around 89 households.  
[Para, 7.104]
- 1.193 Out of the total number of 510 number of persons from 89 households, males constitute 46.47 percent while females constitute 53.53 percent, **higher than male percentage.**  
[Para, 7.106]

- 1.194 The literacy percentage being 55.69 is not discouraging though lower than district and state average percentage literacy.  
[Para, 7.126]
- 1.195 The bulk of farming community is from small and marginal farmers pursuing agriculture as main source of livelihood.  
[Para, 7.126]
- 1.196 The complete absence of persons in occupation allied to agriculture as main occupation is a definite drawback.  
[Para, 7.126]
- 1.197 The involvement of only eight number of family members in secondary sector as main occupation can hardly be termed as satisfactory.  
[Para, 7.126]
- 1.198 Regarding average monthly income, 80.59 percent family members are within the average monthly income range of below Rs. 500.00 per month.  
[Para, 7.126]

#### **IMPACT OF K.V.K.–VOCATIONAL TRAINING – ADOPTED AND CLUSTER VILLAGES**

- 1.199 Regarding yield per-hectare of both agronomical and horticultural crops, the performance in after training situation is better than before training conditions that clearly shows the positive impact of vocational training imparted by the K.V.K.**  
[Para, 7.172]
- 1.200 In case of crops like wheat, paddy, gram, arhar and mustard the per-hectare yield in after training situations is higher than average productivity prevailing both at district and state levels.**  
[Para, 7.172]
- 1.201 Regarding horticulture crops the vocational training have been organised for crop like potato, onion, tomato, brinjal, chilly, bhindi and papaya with rate of participation of 72.84 percent, 34.57 percent, 54.32 percent, 41.98 percent, 35.80 percent, 22.22 percent and 1.23 percent to total of 81 responding families respectively which no doubt is a very bright picture indicating the impact of vocational training organised by the K.V.K.**  
[Para, 7.172]
- 1.202 As regards livestock and dairying, 12.35 percent households have participated in vocational training on improved feeding management. The response is encouraging as in case of other K.V.Ks. the participation for this subject is either nil or negligible.**  
[Para, 7.172]
- 1.203 Regarding poultry 12.35 percent households have participated in the vocational training pertaining to breeding practices, improved caging system, improved feed management and vaccination of birds which are positive deviations from other K.V.Ks. where the response to this activity, is, generally, nil.**  
[Para, 7.172]
- 1.204 Response to home science activities is also encouraging particularly for items like preparation of pickles and preparation of papad/bari/jam/jelly etc wherein 96.30 percent and 55.56 percent households respectively have taken part in vocational training with substantial physical output.**  
[Para, 7.172]

- 1.205 Organic farming is yet another field wherein 38.27 percent households have taken training on subject like preparation of bio-fertilizer with tangible physical results.  
[Para, 7.172]
- 1.206 No vocational training has been organised on subjects like fishery development, agro-forestry and watershed activities.  
[Para, 7.172]

#### **IMPACT OF K.V.K. – FRONT LINE DEMONSTRATIONS – ADOPTED AND CLUSTER VILLAGES**

- 1.207 Front Line Demonstrations organised in our area of study have lead to enhancement in productivity of most of the agronomical and horticultural crops in after training situations as compared to before training conditions which show the positive impact of K.V.Ks. efforts.  
[Para, 7.195]
- 1.208 Regarding crops like wheat, paddy, maize, gram, arhar and mustard, the per-hectare yield in after training situations is more than the average productivity prevailing at district and state levels.  
[Para, 7.195]
- 1.209 Regarding horticultural crops like tomato, brinjal and chilly, the number of F.L.Ds. organised 13,2 and 1 respectively with better performance in after training conditions as compared to before training situations.  
[Para, 7.195]
- 1.210 Since no F.L.Ds. have been organised on subjects like livestock and dairying, fisheries development, agro-forestry, organic farming and watershed activities, the impact of F.L.Ds. for these subjects will not be visible.  
[Para, 7.195]

#### **IMPACT OF K.V.K. – ON FARM TESTING – ADOPTED AND CLUSTER VILLAGES**

- 1.211 In case of On Farm Testing [O.F.T.] also, the yield per-hectare in after training conditions is more than before training situations for agronomical crops which shows the positive impact of K.V.Ks. efforts.  
[Para, 7.209]
- 1.212 No O.F.Ts. have been organised for any of the horticulture crops which certainly is a gap in performance.  
[Para, 7.209]
- 1.213 Since no O.F.Ts. have been organised on subjects like livestock and dairying, poultry, fishery development, agro-forestry, organic farming and watershed activities, the impact of O.F.T. relating to such subjects is not visible.  
[Para, 7.209]

#### **STATUS OF ACTIVITIES IN CONTROL VILLAGE – BHARGAWAN**

- 1.214 The study has identified one control village with 8 number of sample households and 45 sample family members where there is no intervention of K.V.K. In the following table comparative information regarding performance in control village and adopted and cluster villages has been given;  
[Para, 7.210]

**Comparative Status of Performance Among Control Village and Adopted and Cluster Villages**

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3175.00	3379.56	(+) 204.56
2	Paddy	2443.00	3088.50	(+) 645.50
3	Maize	1600.00	1809.00	(+) 209.00
4	Jowar	500.00	-	-
<b>PULSES</b>				
5	Gram	3100.00	3128.44	(+) 28.44
6	Arhar	1250.00	1130.11	(-) 119.89
7	Lentil	1600.00	-	-
<b>OIL SEEDS</b>				
8	Mustard	780.00	1058.67	(+)278.67
<b>HORTICULTURE CROPS – QUINTAL</b>				
9	Potato	187.00	212.56	(+) 25.56
10	Onion	158.00	241.20	(+) 83.20
11	Tomato	100.00	184.88	(+) 84.88
12	Brinjal	150.00	196.75	(+) 46.75
13	Chilly	80.00	168.75	(+) 88.75
14	Bhindi	75.00	189.60	(+) 114.60
15	Cucerbites	40.00	-	-
16	Papaya	50.00	-	-

**1.215 Except for the arhar crop where per-hectare yield in control village is more than adopted and cluster villages, for rest of the crops the per-hectare yield in adopted and cluster villages is more than control village that shows the positive impact of the efforts of K.V.K. [Para, 7.211]**

**RESULTS OF SURVEY – INDIVIDUAL PARTICULARS**

1.216 The reactions of 25 percent of individuals taken from the family members of 25 percent households have been recorded. The table below shows the details;

**Basic Details**

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	183	45
2	Cluster Villages	282	68
3	Control Village	45	11
	<b>Total</b>	<b>510</b>	<b>124</b>

[Para, 7.213]

**Individual Particulars - Adopted and Cluster Villagers**

**1.217 The majority of 62 individuals are from the S.T. community that accounts for 54.87 percent to total of 113 individuals from adopted and cluster villages with cent percent individuals as followers of Hindu religion.**

[Para, 7.274]

**1.218 The cent-percent awareness of individuals about the K.V.K. in terms of its location and more importantly, the services rendered by it is an important achievement of K.V.K.**

[Para, 7.274]

- 1.219 Out of total of 113 individuals, 111 individuals [98.23 percent] are in regular contact with K.V.K. mainly because of their desire for adopting new technology [86.73 percent] and for plant protection [7.08 percent individuals].  
[Para, 7.274]
- 1.220 Regarding implementation, 98.23 percent individuals have implemented the services of K.V.K. This is an achievement by itself.  
[Para, 7.274]
- 1.221 Except for the subjects like agronomy and home science where 98.23 percent and 97.35 percent individuals have implemented the services rendered by K.V.K., in rests of the subjects like horticulture, animal husbandry, fishery, poultry, agro-forestry, organic farming, watershed activities and training of rural youth, no implementation efforts have been done by the sample individuals.  
[Para, 7.274]
- 1.222 Regarding impact of K.V.Ks. efforts over income enhancement, 99.12 percent individuals have given positive response that justifies the laudable performance of the K.V.K.  
[Para, 7.274]
- 1.223 Regarding continuance of the services of K.V.K. 97.35 percent individuals have given positive response that justifies the laudable performance of the K.V.K.  
[Para, 7.274]
- 1.224 It is worth considering to incorporate in the mandate of K.V.K. the new subjects like production of by-products and marketing of the product.  
[Para, 7.274]
- 1.225 Regarding impact of enhanced income, 76.99 percent and 87.61 percent individuals to total of 113 individuals have reported positive impact over levels of education and health respectively.  
[Para, 7.274]

#### **INDIVIDUAL PARTICULARS – CONTROL VILLAGE**

- 1.226 The majority of 81.82 percent individuals are from S.T. community. Cent-percent individuals are followers of Hindu religion.  
[Para, 7.274]
- 1.227 Regarding awareness about existence of K.V.K., 36.36 percent individuals are aware of its existence.  
[Para, 7.274]
- 1.228 Regarding satisfaction derived from per-hectare yield of agronomical and horticulture crops, the cent percent individuals from control village have expressed their dissatisfaction.  
[Para, 7.274]
- 1.229 Regarding home science activities and training of rural youth the positive response from the individuals of control village is substantial.  
[Para, 7.274]
- 1.230 Regarding educational status, 36.36 percent individuals have reported positively above their male children attending elementary level of education while 45.45 percent individuals reported positively about their female wards attending the elementary level of education.  
[Para, 7.274]
- 1.231 Regarding health status the positive response from individuals is substantial.  
[Para, 7.274]
- 1.232 Regarding status of drinking water facilities, cent percent individuals have responded positively about availability of hand-pumps as main source of drinking water.  
[Para, 7.274]

## KRISHI VIGYAN KENDRA, SHAHDOL

- 1.233 Established in the year 1992, the K.V.K. is located in the Technical School Campus, Rewa Road, Shahdol. The institution is being run under the overall control of Jawahar Lal Nehru Krishi Vishwa Vidyalaya [J.N.K.V.V.], Jabalpur with Training Organiser as head of the institute. At present the total number of staff in position is 10 against the sanctioned strength of 16 persons. The farm area of the K.V.K. is 14.89 hectares, out of which 10.52 hectares is cultivable without any irrigation facility. The K.V.K. has got no administrative building of its own and the office is located in the building provided by the district Collector.  
**[Para, 8.8,8.9,8.10]**
- 1.234 In the year 2003-2004 against the budget allocation of Rs. 12.10 lakh the expenditure was to the tune of Rs. 7.56 lakh.  
**[Para, 8.13]**

### RESULTS OF SURVEY – VILLAGE PARTICULARS

- 1.235 The total population of ten identified villages as per census, 2001 is 5586 which is 0.48 percent to total rural population of district Shahdol. In all the ten identified villages the percentage of S.T. population is more than S.C. population. The literacy rate that ranged between 19.6 percent for village Antari [cluster village] to 61.0 percent for village Nipaniya [adopted village] is close to the district percentage literacy level of 58.71 and state percentage literacy level of 64.11 **thus defying one of the fixed notions that areas with substantial tribal population usually have low literacy rate.**  
**[Para, 8.32]**
- 1.236 **The work participation rate** that ranged between 37.5 percent in village Nipaniya [adopted village] to 58.8 percent in village Antari [cluster village] is in general more among males than females. In general the proportion of female marginal workers is more than that of males which is rather obvious as the females do odd jobs in their spare time after completing household obligations. Regarding non-workers that ranged between 43.2 percent in village Antari [cluster village] to 62.5 percent in village Nipaniya [adopted village] present a dismal picture as it shows higher percentage of dependent population.  
**[Para, 8.34,8.35]**
- 1.237 Agriculture is the main occupation of ten number of identified villages covered under the study as the combined average percentage of cultivators and agriculture labour is 72.78 percent to total workers. In general the proportion of male cultivators is more than that of females except in village Simariya [cluster village] where percentage of female cultivators is 28.1 as against 23.8 percent of male cultivators. In case of agriculture labour the percentage of female participation, in general, is more than male participation which seems natural as in villages with substantial tribal population where the work culture is equally high among females.  
**[Para, 8.37]**
- 1.238 Regarding land-use the gross cropped area of the ten identified villages is 63.84 percent to total geographical area. As regards irrigation, the percentage of gross irrigated area to gross cropped area is only 3.90.  
**[Para, 8.39, 8.40]**
- 1.239 All the ten number of villages covered under the study are electrified with irregular power supply situation. The total number of pump sets energized is 131 which is 4.57 percent to total number of 2865 pump sets energized in the district.  
**[Para, 8.82]**
- 1.240 The availability of road infrastructure is not much satisfactory as only 2 villages have fair weather roads and only in one village Kharanja Roads exist.  
**[Para, 8.82]**

- 1.241 Except for village Antari [cluster village] where the primary school is located at a distance of within 3 kms, in rest of nine number of villages the facility of primary school is available within the village periphery.  
**[Para, 8.82]**
- 1.242 The sub-health-centres and rural family welfare centres are located within the easy reach of the villagers.  
**[Para, 8.82]**
- 1.243 In all the ten number of sample villages one or other **drinking water** source, mostly hand pumps, is available.  
**[Para, 8.82]**

## **RESULTS OF SURVEY – HOUSEHOLD PARTICULARS**

### **MACRO DIMENSION**

- 1.244 The total number of household covered under the study is 815 for all the ten number of identified villages. The average size of the family comes to six persons.  
**[Para, 8.86]**
- 1.245 There is preponderance of households from S.T. and O.B.C. communities that constitute 94.48 percent to total number of 815 households.  
**[Para, 8.88]**
- 1.246 Against the total number of 815 households, 810 households are followers of Hindu religion while only 5 households are the followers of Muslim religion.  
**[Para, 8.90]**
- 1.247 Agriculture is the main stay of the households residing in identified ten number of villages as 86.99 percent households as compared to total households are engaged directly in agriculture occupation as prime source of livelihood.  
**[Para, 8.107]**
- 1.248 In secondary and tertiary sector activities, 37 number of households are engaged as main source of livelihood which is 4.54 percent to total number of 815 number of households.  
**[Para, 8.107]**
- 1.249 The 93.62 percent of households are within the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is the indication of affluence level of sample area with matching levels of average monthly expenditure.  
**[Para, 8.107]**

### **RESULTS OF THE SURVEY – MICRO DIMENSION**

- 1.250 In this section of write-up, 25 percent of households have been identified for detailed enquiry that comes to 199 households.  
**[Para, 8.108]**
- 1.251 Out of the total number of 1145 family members the male members are 550 constituting 48.03 percent to total family members, while for females this percentage is 51.97, **a rare trend of more females over males.**  
**[Para, 8.110]**
- 1.252 The literacy percentage being 68.32 in the sample area is amazingly high that indicates the absorption capacity of the individuals to adopt latest technology regarding agriculture imparted by K.V.K.  
**[Para, 8.126]**



- 1.253 The bulk of farming community is from the category of farmers having sizeable land holdings constituting 57.63 percent total of 236 persons pursuing various main occupations.  
[Para, 8.126]
- 1.254 Regarding activities allied to agriculture 16 number of persons are engaged in minor forest produce collection which is 6.78 percent to total of 236 persons engaged in various main occupations.  
[Para, 8.126]
- 1.255 The employment of only 8 persons in secondary and tertiary sectors is hardly meaningful.  
[Para, 8.126]
- 1.256 Regarding average monthly income, 80.44 percent family members are within the average monthly income of Rs. 1001.00 and above.  
[Para, 8.126]

#### **IMPACT OF K.V.K.–VOCATIONAL TRAINING – ADOPTED AND CLUSTER VILLAGES**

- 1.257 Regarding the yield per-hectare both for agronomical and horticulture crops, the after training status as compared to before training conditions are better that clearly shows the positive impact of vocational training imparted by the K.V.K.  
[Para, 8.167]
- 1.258 In case of crops like wheat, paddy, gram, arhar, lentil and mustard, the per-hectare yield in after training situations is more than the average productivity prevailing both at district and state levels.  
[Para, 8.167]
- 1.259 Regarding horticulture crops, the vocational trainings have been organised for crops like potato, onion, tomato, brinjal, chilly, bhindi and cucerbites with productivity much higher in after training situations as compared to before training conditions.  
[Para, 8.167]
- 1.260 Home science activities, particularly for functions like preparation of pickles and papad/bari etc are getting popular as responses to vocational trainings are substantial.  
[Para, 8.167]
- 1.261 Regarding training of rural youth, only 3 households have taken part in vocational trainings for motor binding with placement of three persons in after training situations.  
[Para, 8.167]
- 1.262 Preparation of bio-fertilizer is becoming popular as 11.70 percent to total of 188 responding households have participated in the vocational training with preparation of 640 kgs of it in after training situations as compared to preparation of only 40 kgs in before training conditions.  
[Para, 8.167]
- 1.263 No vocational trainings have been organised on subjects like livestock and dairying, poultry, fishery development, agro-forestry and watershed activities.  
[Para, 8.167]

#### **IMPACT OF K.V.K.–FRONT LINE DEMONSTRATIONS–ADOPTED AND CLUSTER VILLAGES**

- 1.264 Regarding organisation of F.L.Ds. the performance is just sketchy without having tangible impact as most of the important subjects like horticulture, livestock and dairying, poultry, fishery development, home science, training of rural youth agro forestry, organic farming and watershed activities have been left out.  
[Para, 8.175]

## IMPACT OF K.V.K. – ON FARM TESTING – ADOPTED AND CLUSTER VILLAGES

1.265 In case of On Farm Testing [O.F.T.], the yield per-hectare in after training situation is more than before training conditions as has happened for both vocational training and front line demonstration, which shows the positive impact of K.V.Ks. efforts.

[Para, 8.183]

1.266 The overall performance regarding organisation of O.F.Ts. is sketchy as is evident from the fact that on very important subjects like horticulture, livestock and dairying, poultry, fishery development, agro-forestry and watershed activities no O.F.Ts. have been organised.

[Para, 8.183]

## STATUS OF ACTIVITIES IN CONTROL VILLAGE – KERHAI

1.267 The study has identified one control village i.e. Kerhai with 11 number of households and 61 sample family members where there is no intervention of K.V.K. In the following table comparative information regarding performance in control village and adopted and cluster villages has been shown;

Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3033.00	3213.67	(+) 180.67
2	Paddy	2291.00	2303.00	(+) 12.00
3	Maize	1417.00	1456.00	(+) 39.00
4	Jowar	533.00	850.00	(+) 317.00
<b>PULSES</b>				
5	Gram	900.00	2300.89	(+) 1400.89
6	Arhar	800.00	1022.56	(+) 222.56
7	Lentil	-	700.00	-
<b>OIL SEEDS</b>				
8	Soybean	-	-	-
9	Mustard	733.00	819.25	(+) 86.25
10	Linseed	-	-	-
<b>HORTICULTURE CROPS – QUINTAL</b>				
11	Potato	-	216.20	-
12	Onion	200.00	248.33	(+) 48.33
13	Tomato	170.00	187.88	(+) 17.88
14	Brinjal	180.00	271.44	(+) 91.44
15	Chilly	-	185.14	-
16	Bhindi	-	163.33	-
17	Cucurbits	-	190.00	-

1.268 The above table shows that except for the crops like wheat, jowar, arhar, mustard and brinjal where the per-hectare yield for adopted and cluster villages is substantially high as compared to that prevailing in control village, for rest of the crops the difference in per hectare yield is not much between adopted/cluster villages on one side and the control village on the other side. This shows that district as whole has conducive conditions for agricultural activities.

[Para, 8.184]

## RESULTS OF SURVEY – INDIVIDUAL PARTICULARS

1.269 The reactions of 25 percent of individuals taken from the family members of 25 percent households have been recorded. The table below shows the details;

Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	561	138
2	Cluster Villages	523	132
3	Control Village	61	15
	<b>Total</b>	<b>1145</b>	<b>285</b>

[Para, 8.187]

### Individual Particulars - Adopted and Cluster Villagers

1.270 The majority of 119 individuals are from the S.T. community that accounts for 44.07 percent to total of 270 individuals from adopted and cluster villages. The cent percent sample individuals from our area of study are followers of Hindu religion.

[Para, 8.244]

1.271 The cent-percent awareness of individuals about the K.V.K. in terms of its location and services rendered by it is an important achievement of K.V.K.

[Para, 8.244]

1.272 The survey results show the regular contact of 89.63 percent individuals mainly because of the desire for adopting new technology and for obtaining quality seed. The positive impact of the efforts of the K.V.K. is clearly visible.

[Para, 8.244]

1.273 Out of 270 individuals, 263 individuals have implemented the services of K.V.K. which is 97.41 percent to total respondents which, in itself, is an achievement of the K.V.Ks. efforts.

[Para, 8.244]

1.274 In the field of agronomy maximum number of 266 individual [98.52 percent to total of 270 individuals] have implemented the improved techniques followed by 65 individuals [24.07 percent] for home science and 19 individuals implementing the technique regarding organic farming.

[Para, 8.244]

1.275 About 99 percent positive response regarding impact of K.V.K. services over income enhancement has been reported which is of credit to the efforts of K.V.K. in its various fields of operation.

[Para, 8.244]

1.276 Out of 270 individuals, 269 individuals [99.63 percent to total individuals] have reported for the continuance of the services of K.V.K. particularly for subjects like agronomy, home science and organic farming which again shows the positive impact of the services rendered by the K.V.K.

[Para, 8.244]

1.277 Regarding suggestions for additional services to be rendered by K.V.K., the sample individuals have given useful suggestions regarding introduction of production of by-products of crops and development of marketing strategy for fair return of the product for incorporation in the training mandates of K.V.K.

[Para, 8.244]

**1.278 Regarding impact of income enhancement, 83.33 percent, 96.67 percent and 34.44 percent individuals to total of 270 individuals have reported positive impact over levels of education, health and housing conditions respectively.**  
**[Para, 8.244]**

#### **INDIVIDUAL PARTICULARS – CONTROL VILLAGE**

1.279 The majority of individuals i.e. 60 percent to total of 15 sample individuals are from S.T. community. Cent-percent individuals are followers of Hindu religion.  
**[Para, 8.261]**

1.280 The 40 percent level of awareness among sample individuals of control village is a matter of concern which shows a portion of population is unaware about prevailing and new technology relating to agriculture and allied services.  
**[Para, 8.261]**

1.281 Regarding satisfaction level of per-hectare yield of agronomical and horticultural crops, the cent-percent individuals of control village have expressed their dissatisfaction with suggestions to organize training activities on water conservation methods and application of agriculture inputs.  
**[Para, 8.261]**

1.282 For augmentation of income levels, cent-percent individuals are in favour of toy making, followed by pickle preparation by 73.33 percent individuals, backing activities by 20.00 percent individuals and preparation of papad/bari/jam/jelly by 40.00 percent individuals.  
**[Para, 8.261]**

1.283 Regarding elementary level of education 26.67 percent individuals have reported that their male wards attend the schools whereas for female wards 60.00 percent individuals have reported in favour of their school attendance.  
**[Para, 8.261]**

1.284 A very satisfactory level of health scenario is existing in control village wherein for most of the basic health parameters the positive responses are much higher than the responses from adopted and cluster villages.  
**[Para, 8.261]**

1.285 Hand pumps are the main source of drinking water in our control village where cent percent individuals have reported for its existence.  
**[Para, 8.261]**

## KRISHI VIGYAN KENDRA, TIKAMGARH

1.286 Established in the year 1999, the K.V.K. is located in the Tikamgarh Development Block of district Tikamgarh. It is being run under the overall control of J.N.K.V.V., Jabalpur with Training Organiser as the Chief of the K.V.K., having six number of technical staff and three number of non-technical staff. The farm area of the K.V.K. is 20 hect., entirely irrigated and cultivated. The K.V.K. has got administrative building of its own.

**[Para, 9.5]**

1.287 Regarding budget allocation, the K.V.K. receives an average allocation of Rs. 27.47 lakh per year over the years 2001-2002 to 2003-2004 against which the average expenditure per year is Rs. 23.94 lakh.

**[Para, 9.8]**

### RESULTS OF SURVEY – VILLAGE PARTICULARS

1.288 The total population of ten identified villages as per census, 2001 is 7201 which is 0.73 percent to the total rural population of district Tikamgarh with preponderance of male population over female population and S.C. population over S.T. population. The percentage literacy that ranged between 43.2 for village Manikpura to 65.7 percent for village Neemkhera, is close to district level percentage literacy of 55.80 and state level figure of 64.11.

**[Para, 9.29]**

1.289 **The work participation rate** that ranged between 26.6 percent for village Surajpur [adopted village] to 58.8 percent in village Sujanpura [cluster village] is, in general, more among males than females except for villages Sujanpura, Papawani and Neemkhera where a reverse trend is true. In cent-percent sample villages the male participation as main workers is higher than female participation, while a reverse situation is seen in case of marginal workers where female participation is more than male participation. The proportion of non-workers that ranged between 41.3 percent for village Sujanpura [cluster village] to 73.4 percent for village Surajpur [adopted village] presents a dismal picture.

**[Para, 9.31]**

1.290 Agriculture remains to be the main occupation of the ten villages identified for the study. Out of the ten villages, in five number of villages viz. Surajpur, Charpuan, Papawani, Bauri and Khiriya, the proportion of female cultivators is more than that of male cultivators [In case of village Surajpur cent percent cultivators are females] that signifies the awareness and intent of the female members of the farming community to work along with their male counterpart for addition in household income. The situation regarding the proportion of workers in household industries to total workers is far from being satisfactory as it ranged between 0.3 percent for villages Khiriya and Manikpura [both cluster villages] to 1.7 percent for village Bauri [cluster village]

**[Para, 9.33, 9.35]**

1.291 Regarding land-use the gross cropped area of the ten identified villages is 2788 hectares which is 84.43 percent to total geographical area. As regards irrigation, the percentage of gross irrigated area to gross cropped area is 64.20 which is much above the district average of 53.56 percent and state average of 28.54 percent.

**[Para, 9.38, 9.39]**

1.292 All the villages covered under the study are electrified with irregular power supply situation. The total number of pump sets energized is 410 which is 1.42 percent to total number of 28920 pump sets energized in district Tikamgarh in the year 1999-2000.

**[Para, 9.78]**

1.293 The status of road infrastructure in identified ten number of villages is highly satisfactory.

**[Para, 9.78]**

- 1.294 Regarding education, the existence of primary schools within the geographical limits of all the ten number of villages covered under that study is an encouraging factor.  
[Para, 9.78]
- 1.295 Regarding health scenario, village Khiriya [cluster village] has both sub-health centre and rural family welfare centre within the geographical limit of the village. In two villages even the private clinics are located within the village periphery.  
[Para, 9.78]
- 1.296 In all the ten number of sample villages one or the other **drinking water** source, mostly hand pumps, is available.  
[Para, 9.78]

## **RESULTS OF SURVEY – HOUSEHOLD PARTICULARS MACRO DIMENSION**

- 1.297 The total number of households as per survey is 1020 with average size of the family of 7 persons. All the households are the followers of Hindu religion.  
[Para, 9.104]
- 1.298 The combined percentage of S.C. and O.B.C. communities is 86.47 to total of 1020 households.  
[Para, 9.104]
- 1.299 Out of total of 1020 households, 870 number of households constituting 85.29 percent to total households are engaged directly in agriculture as their main occupation.  
[Para, 9.104]
- 1.300 Out of 1020 households, 5 number of families are engaged in livestock activities as main occupation while six number of households are pursuing hunting as their main occupation which are encouraging deviations.  
[Para, 9.104]
- 1.301 The pursuance of secondary and tertiary sectors as main occupation is only marginal.  
[Para, 9.104]
- 1.302 Out of 1020 number of households, the combined percentage of households within the average monthly income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001 and above is 99.90 which shows overall affluence level of the area.  
[Para, 9.104]

## **RESULTS OF THE SURVEY – MICRO DIMENSION**

- 1.303 In this part of the Chapter 25 percent of households have been identified for detailed enquiry which comes to 256 households.  
[Para, 9.105]
- 1.304 Out of total of 1434 number of persons from 256 households males constitute 51.60 percent while females constitute 48.40 percent.  
[Para, 9.128]
- 1.305 Against the total of 1434 persons among sample households, the percentage literacy is 73.85, far above than the district average of 55.80 percent and state average of 64.11 percent.  
[Para, 9.128]
- 1.306 The incorporation of 81.03 percent family members within the average monthly income range of Rs. 1001.00 and above and similar percentage of 82.29 family members within the average monthly expenditure of Rs. 1001.00 and above is the sure indication of the affluence level of the area.  
[Para, 9.128]

## **IMPACT OF K.V.K.–VOCATIONAL TRAINING – ADOPTED AND CLUSTER VILLAGES**

- 1.307** Regarding the yield per-hectare both for agronomical and horticulture crops, the after training situation is better than before training conditions that clearly shows the positive impact of vocational training imparted by the K.V.K.  
[Para, 9.175]
- 1.308** In case of crops like wheat, paddy, maize, gram, arhar, lentil, soybean, mustard and linseed, the per-hectare yield in after training situation is more than the average productivity prevailing both at district and state levels.  
[Para, 9.175]
- 1.309** For important horticulture crops like potato, onion, tomato, brinjal, chilly, bhindi and papaya with rate of participation of 24.39 percent, 6.50 percent, 15.04 percent, 8.54 percent, 10.60 percent, 5.69 percent and 1.22 percent respectively with yield rates higher in A.T. situations as compared to B.T. conditions.  
[Para, 9.175]
- 1.310** In case of livestock, dairy and poultry though the response is marginal, but somehow the picture is encouraging.  
[Para, 9.175]
- 1.311** Response to home science activities in quite encouraging particularly for items like preparation of pickles and papad/bari/jam/jelly etc.  
[Para, 9.175]
- 1.312** No vocational trainings have been organised for subjects like fishery, agro-forestry and watershed activities which are important functions from the view points of income augmentation in rural areas.  
[Para, 9.175]

## **IMPACT OF K.V.K. – FRONT LINE DEMONSTRATIONS – ADOPTED AND CLUSTER VILLAGES**

- 1.313** Front line demonstrations organised in our area of study has lead to enhancement in productivity of most of agronomical and horticultural crops in after training situations as compared to before training conditions which show the positive impact of K.V.Ks. efforts.  
[Para, 9.191]
- 1.314** Regarding crops like wheat, paddy, maize, gram, arhar, lentil, soybean and mustard the F.L.Ds. organised are 26,3,2,6,5,6,10 and 6 respectively with better performance in after training situations as compared to per-hectare yield prevailing both at district and state levels.  
[Para, 9.191]
- 1.315** Since no F.L.Ds. have been organised on subjects like horticulture, livestock and dairying, fisheries development, home science, training of rural youth, agro-forestry, organic farming and watershed activities the impact of F.L.D. for these subjects will not be visible.  
[Para, 9.191]

## IMPACT OF K.V.K. – ON FARM TESTING – ADOPTED AND CLUSTER VILLAGES

**1.316** In case of On Farm Testing [O.F.T.], the yield per-hectare in after training situation is more than before training conditions as has occurred for both vocational training and front line demonstrations, which shows the positive impact of K.V.Ks. efforts.

[Para, 9.204]

**1.317** Since no O.F.Ts. have been organised on subjects like horticulture, livestock and dairying, poultry, fishery development, home science, training of rural youth, agro-forestry, organic farming and watershed activities, the impact of O.F.T. on such subject will not be visible.

[Para, 9.204]

### STATUS OF ACTIVITIES IN CONTROL VILLAGE – NEEMKHERA

**1.318** The study has identified one control village, i.e., Neemkhera with 10 number of sample households and 68 sample family members where there is no intervention of K.V.K. In the following table comparative information regarding performance in control village and adopted and cluster villages has been shown.

[Para, 9.205]

Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	4060.00	4176.33	(+) 116.33
2	Paddy	3240.00	3418.67	(+) 178.67
3	Maize	2028.00	2034.80	(+) 6.80
4	Jowar	-	1393.43	-
<b>PULSES</b>				
5	Gram	1800.00	2448.33	(+) 648.33
6	Arhar	1629.00	1688.67	(+) 59.67
7	Lentil	1500.00	1550.20	(+) 50.20
<b>OIL SEEDS</b>				
8	Soybean	1970.00	2945.75	(+) 975.75
9	Mustard	1606.00	1635.63	(+) 29.63
10	Linseed	3000.00	3001.00	(+) 1.00
<b>HORTICULTURE CROPS – QUINTAL</b>				
11	Potato	240.00	242.33	(+) 2.33
12	Onion	179.00	184.25	(+) 5.25
13	Tomato	210.00	218.78	(+) 8.78
14	Brinjal	200.00	273.38	(+) 73.38
15	Chilly	210.00	212.22	(+) 2.22
16	Bhindi	87.00	163.63	(+) 76.63
17	Papaya	-	105.00	-

**1.319** Except for the crops like Gram, Soybean, Wheat and Paddy where there is substantial gap in per hectare yield between adopted and cluster villages and control village in rest of the crops the difference is only marginal that shows the overall situation of agriculture is good in district Tikamgarh.

[Para, 9.206]



## RESULTS OF SURVEY – INDIVIDUAL PARTICULARS

1.320 The reactions of 25 percent of individuals taken from the family members of 25 percent households have been recorded. The table below shows the details;

Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	449	109
2	Cluster Villages	917	231
3	Control Village	68	16
	<b>Total</b>	<b>1434</b>	<b>356</b>

[Para, 9.208]

### Individual Particulars - Adopted and Cluster Villagers

1.321 The majority of 269 individuals are from S.C. and O.B.C. communities accounting for 79.12 percent to total of 340 individuals from adopted and cluster villages. The cent percent sample individuals from our area of study are the followers of Hindu religion.

[Para, 9.269]

1.322 The cent-percent awareness of individuals about the K.V.K. in terms of its location and more importantly the services rendered by it is an important achievement of K.V.K.

[Para, 9.269]

1.323 Out of 340 individuals, 321 individuals [94.41 percent] are in regular contact with K.V.K. mainly because of the desire for adopting new technology.

[Para, 9.269]

1.324 Regarding implementation, 97.94 percent individuals have implemented the services of K.V.K. This is an achievement by itself.

[Para, 9.269]

1.325 Except for the subjects like agronomy and home science where 97.94 percent and 33.53 percent individuals have implemented the services rendered by K.V.K., in rest of the subjects like animal husbandry, fishery, poultry, agro-forestry, watershed activities and training of rural youth, no implementation efforts have been done.

[Para, 9.269]

1.326 Agronomy and home science are the subjects for which satisfaction level is substantial.

[Para, 9.269]

1.327 Regarding impact of K.V.Ks. efforts, over income enhancement, cent-percent individuals have given positive response, which is an achievement by itself.

[Para, 9.269]

1.328 Regarding continuance of the services of K.V.K., 99.71 percent individuals have given positive response that shows the laudable performance of the K.V.K.

[Para, 9.269]

1.329 It is worth considering to incorporate in the mandates of K.V.K., the new subjects like production of by products and marketing strategy of the product.

[Para, 9.269]

1.330 Regarding impact of enhanced income over levels of education, 82.06 percent individuals have given positive response, particularly in case of elementary education for both boys and girls, which, no doubt, is an encouraging trend.

[Para, 9.269]

**1.331 90 percent to total of 340 individuals have reported about positive impact of enhanced income over health status.**

**[Para, 9.269]**

#### **INDIVIDUAL PARTICULARS – CONTROL VILLAGE**

1.332 The cent percent individuals are from O.B.C. community with cent-percent of individuals as followers of Hindu religion.

**[Para, 9.285]**

1.333 Regarding awareness, 56.25 percent individuals are aware of the existence of K.V.K.

**[Para, 9.285]**

1.334 Regarding satisfaction derived from per-hectare yield of agronomical and horticulture crops, 75.00 percent individuals for control village have expressed their satisfaction.

**[Para, 9.285]**

1.335 Regarding satisfaction level for activities like livestock and dairy and poultry, 62.50 percent and 50.00 percent individuals have expressed their satisfaction.

**[Para, 9.285]**

1.336 Regarding educational status, 56.25 percent individuals have reported positively about their male children attending elementary level of education. More or less similar is the situation for girls where 31.25 percent individuals have given positive response.

**[Para, 9.285]**

1.337 Regarding health status, the positive response from individuals is substantial.

**[Para, 9.285]**

1.338 Regarding status of drinking water facilities, cent-percent individuals have responded positively about availability of hand pumps as main source of drinking water.

**[Para, 9.285]**

## Chapter Two

### Historical Background and Objectives of the Krishi Vigyan Kendra [K.V.K.] Programme and its Present Status in Madhya Pradesh

- 2.1 The agriculture sector forms the backbone of the Nation's economy. The prosperity of the nation lies in the advancement of agriculture and its allied activities that basically calls for the transformation of agriculture and its related sectors from its present traditional status to some what vibrant and galloping functioning units assuming characteristics of secondary sector through introduction of modern technology. Since the percentage of workers engaged in agriculture to total works is 58.20, any attempt to growth with social justice shall have to keep the agriculture on priority list.
- 2.2 Agriculture development is desirable not only for its direct impact on the lives of most of rural population reliant on it, but also for its favorable impact on the other sectors of industry and services. Employment opportunities that the agriculture sector generates are critical to the size of the market for the industry and service sectors. Development of rural non-farm sector which is equally important for its impact on the development process through employment creation, higher income and poverty alleviation is, ultimately, dependent on dynamic growth of agriculture and its related sectors.
- 2.3 Agriculture production though made satisfactory progress in terms of per hectare yield of food crops from 13.8 quintals per hectare in 1990-01 to 17.4 quintal per hectare in 2001-2002, but judging from the view points of overall population growth and vagaries of crop production due to dependence on monsoon and traditional nature of Indian agricultural practices, the need for better organisation of agriculture and its related sectors has been felt as reflected in various plan documents.
- 2.4 Since the initial years of economic planning, particularly from the Third Plan onwards, agriculture remained the prime agenda of the planners, as very justifiably said that agriculture forms the pivot round which most of the socio-economic functions of the country revolve. The attempts made though were sincere, but, some how, lacked the compositeness necessary for rapid growth of any sector particularly the agriculture sector, which has, perhaps, the smallest gestation period i.e. one agriculture year from July to June. With the advent of new technologies in the field of agriculture, it was felt necessary to come out with a package of programme to boost agriculture output to desired levels. The best way, thus, perceived was to take technological advancement to farming communities in the form of packages of basic agriculture inputs. **This is where the concept of constituting Krishi Vigyan Kendras took roots in the sensibilities of agriculture experts that, in subsequent years, took deeper roots.**
- 2.5 The Education Commission [1964-66] recommended that a vigorous effort be made to establish specialized institutions to provide Vocational Education in agriculture and allied fields at the pre and the post matriculation levels to cater to the training needs of a large number of boys and girls coming from rural areas. The Commission, further suggested that such institutions be named as "Agricultural Polytechnics". The recommendations of the Commission was thoroughly discussed during 1966-72 by the Ministry of Education, Ministry of Agriculture, Planning Commission, Indian Council of Agricultural Research [I.C.A.R.] and other allied institutions. **Finally, the ICAR mooted the idea of establishing Krishi Vigyan Kendras [Agricultural Science Centres] as innovative institutions for imparting vocational training to the practicing farmers, school drop-outs and the field level extension functionaries.** The I.C.A.R. constituted a committee headed by Dr. Mohan Sinha Mehta in 1973 to sort out the modalities for implementing the scheme. The

Committee enunciated the three basic concepts/postulates for establishing Krishi Vigyan Kendras : -

- The Kendras will impart learning through work experience and hence will be concerned with the technical literacy, the acquisition of which does not necessarily require a pre-condition for the ability to read and write.
- The Kendras will impart training to only those extension workers who are already employed or to the practicing farmers and fishermen. In other words the Kendras will cater to the needs of those who are already employed or wish to be self employed.
- There will be no uniform syllabus for Kendras. The syllabus and programme of each Kendra will be tailored to the felt needs, natural resources and the potential for agricultural growth in that particular area.

2.6 The Committee further suggested that the success of Kendras will depend upon adherence to the following three basic principles : -

- Accelerating production relating to agriculture and its allied sectors in the operational area of the Kendra.
- Experiential learning i.e. “teaching by doing” and “learning by doing” should be the principal methods of imparting training.
- The benefits of training should reach to the poorest of the poor sections of the community for raising their living conditions.

2.7 During the course of the implementation of the scheme, it was felt that the vocational training alone would not be useful unless it is followed by front line demonstration in the farmers’ fields to demonstrate latest technology for enhancing agriculture production. Accordingly front line demonstrations on important crops of the district was added to the mandate of the K.V.K. During Eight Plan period the mandate of the K.V.K. was further reviewed as detailed hereunder : -

- Conducting “On farm testing” for identifying technologies in terms of location specific sustainable land use systems.
- Organising training to up-date the knowledge of extension personnel regarding latest development in agriculture field on regular basis.
- Organising short and long term vocational training courses in agriculture and allied vocations for farmers and rural youths with emphasis on learning by doing for higher productivity and generating self employment.
- Organising front line demonstration on various crops to generate production data and other information.

2.8 In order to achieve the above mandate the following **broad objectives** are detailed below which will help the individual K.V.Ks. to develop their specific objectives : -

- Demonstrate the latest agricultural technologies to the farmers as well as the extension workers of the State Departments of Agriculture/Horticulture/ Fisheries/Animal Husbandry/N.G.Os. with a view to reduce the time-lag between technology generation and its adoption.
- In the context of socio-economic status of the farmers, testing and verifying the quality of any technology to suit to the life style of the peripheral farming communities and add additional parameters or delete snags, if any, from the introduced technology.

- To impart training to the practicing farmers/farm women, rural youth and field level extension functionaries by following the method of “teaching by doing” and “learning by doing”.
- In order to benefit large number of farmers/farm women, attempts should be made to organize large number of short courses of one day to one week duration and only limited number of long duration courses. The ‘on campus’ long duration courses should be focused on young farmers both boys and girls with special emphasis on school drop-outs.
- The Krishi Vigyan Kendras [K.V.Ks.] should have no uniform syllabus, the courses will vary according to the local requirements and the specific needs of the targeted groups, which, obviously, will demand interdisciplinary approach and multi-institutional linkages and support. Thus, at the K.V.K. level no specialization in terms of Entomology, Plant Pathology, Soil Science etc. are required, instead a broad based training is required to cater to the requirements of heterogenous farming community.
- The district being the operational area of a K.V.K., may be covered in phased manner. Some small but crucial course like repair and maintenance of diesel pumping sets and electric motors may be organized for the farmers from entire district in different batches.
- The training courses and other programmes of the Kendras should be in line with the developmental programmes of the government. The K.V.Ks. should function in liaison with the government departments, lead bank, cooperatives and other institutions.

**2.9 To sum-up, the basic objective of the K.V.K. is to carry the technological advancement relating to agriculture to the farms scattered over the country in phased manner to enhance agriculture production through the techniques of vocational training, front line demonstration and on farm testing in the spheres of agriculture and its allied sectors including the subjects like home science and training of rural youth for creating avenues of self-employment as well. The phased development of the district is supposed to be achieved by adopting limited number of villages for intensive efforts, the flow effects of which is supposed to influence the cluster group of villages around the periphery of adopted villages. The idea, therefore, is to gradually spread positive effects of technological advancement in the field of agriculture and its allied sectors either directly through adoption of villages or indirectly through identification of cluster group of villages around the adopted villages through the spread effects of knowledge and its positive results in adopted villages. It is worthwhile to mention here that in every district there exist a network of government institutions relating to agriculture and its allied activities working more or less on the lines of K.V.Ks. The K.V.Ks. are therefore supposed to function in liaison with such district functionaries to avoid overlaps and repeat performances in areas already having interventions by government functionaries.**

## **PRESENT STATUS OF K.V.KS. IN MADHYA PRADESH**

2.10 Agriculture is the main stay of the State’s economy. The percentage of workers engaged in agriculture to the total workers, as per Census 2001, is 71.49. The situation, thus, clearly indicates that any attempt to socio-economic development presupposes priority emphasis on agriculture and its related activities. The predominance of marginal and small land holders which, at present, constitute 60.93 percent to total land holders, reinforces the need for developing the agriculture and its related sectors for sustained and holistic development of the State’s economy.

- 2.11 Change in the cropping pattern since 1956-57 is one of the positive factors of agriculture sector. During the year 1956-57 about 63 percent of gross cropped area was covered under cereal crops and that remained more or less the same during the period of “Grow More Food” campaign. However, after the introduction of soybean in 1980-81 some low value cereal crops have been replaced and the percentage coverage of cereals declined to 41 percent of the cropped area in 1999-2000. Similarly the percentage coverage of oilseed crops increased during the period 1980-81 and onwards. The change in the cropping pattern has borne fruit which is evident from the fact that in 1999-2000 the State share of soybean production to national production was about 70 percent and that of oil-seed production was about 27 percent.
- 2.12 With all these achievements, agriculture in Madhya Pradesh is still traditional. The undulating topography, unutilized irrigation potential, practice of keeping land fallow during Kharif and taking only one crop in rabi make it imperative that the soil and water conservation, ground water development, crop diversification and substitution are to be undertaken on priority to accelerate growth in agriculture production.
- 2.13 The policy approach to agriculture, particularly in 1990s has been to secure increased production through subsidies in inputs such as power, water and fertilizer rather than building capital assets. This strategy has run into serious difficulties as the subsidies have become financially unsustainable. Therefore, the proposed, important strategies for the Tenth Plan for agriculture development in Madhya Pradesh are : -
- Focus on raising the productivity of land in a manner which is sustainable over a long period.
  - Bringing the uncultivated waste land into productive use whether in agriculture or horticulture.
  - Increasing work opportunities to women farmers.
  - Raising crop intensity of agricultural land.
  - Enhancing rain water harvesting and increasing the irrigation potential through scientific watershed development.
  - Emphasizing ground water development.
  - Undertaking Watershed Development Programme with people’s participation.
  - Improving rural and district road connectivities through Mandi funds.
  - Strengthening the agriculture research by introducing latest technologies relating to the agriculture.
  - Diversification of agriculture to meet the enhanced food and nutritional needs.
  - Farm mechanization would be given special thrust.
- 2.14 One of the efforts to implement the strategies as envisaged in the Tenth Plan is the constitution of additional numbers of Krish Vigyan Kendras in the State to bring about enhancement in agriculture production through introduction of latest technology through various modes of extension efforts. The table below shows the status of Krishi Vigyan Kendras in Madhya Pradesh.

**Table No. 2.1**  
**Status of Krishi Vigyan Kendras in Madhya Pradesh**  
As on 31<sup>st</sup> March, 2005

Sr. No.	Name of the district where K.V.K. is located	Name of the host organisation	Year of establishment
1	Seoni	Vice Chancellor, J.N.K.V.V., Jabalpur	1994
2	Tikamgarh	Vice Chancellor, J.N.K.V.V., Jabalpur	1994
3	East Nimar [Khandwa]	Vice Chancellor, J.N.K.V.V., Jabalpur	1994
4	Guna	Vice Chancellor, J.N.K.V.V., Jabalpur	1994
5	Chhindwara	Vice Chancellor, J.N.K.V.V., Jabalpur	1983
6	Jhabua	Vice Chancellor, J.N.K.V.V., Jabalpur	1984
7	Sidhi	Vice Chancellor, J.N.K.V.V., Jabalpur	1992
8	Shahdol	Vice Chancellor, J.N.K.V.V., Jabalpur	1992
9	Gwalior	Vice Chancellor, J.N.K.V.V., Jabalpur	1997
10	Balaghat	Vice Chancellor, J.N.K.V.V., Jabalpur	1992
11	Ratlam	President, Kalukheda Siksha Samiti [N.G.O.]	1994
12	Indore	Secretary, Kasturba Gandhi National Memorial Trust [N.G.O.]	1976
13	Satna	Chairman, Deendayal Research Institute, New Delhi [N.G.O.]	1992
14	Bhopal	Director, CIAE [ICAR], Nabibagh, Bhopal	1979
15	Sehore	Executive Director, CRDE-KVK, [N.G.O.]	1999
16	Rajgarh	Vice Chancellor, J.N.K.V.V., Jabalpur	1974
17	Betul	Vice Chancellor, J.N.K.V.V., Jabalpur	2002
18	Dhar	Vice Chancellor, J.N.K.V.V., Jabalpur	2002
19	Panna	Vice Chancellor, J.N.K.V.V., Jabalpur	2002
20	Dindori	Vice Chancellor, J.N.K.V.V., Jabalpur	2002
21	Lahar [Bhind]	Vice Chancellor, J.N.K.V.V., Jabalpur	2003
22	Jabalpur	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
23	Mandsaur	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
24	Rewa	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
25	Ujjain	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
26	Shajapur	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
27	Hoshangabad	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
28	Morena	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
29	Sagar	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
30	West Nimar [Khargone]	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
31	Raisen	Chairman, Deendayal KrishiVikas Avam Anusandhan Samiti., N.G.O.	2003
32	Harda	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
33	Damoh	Vice Chancellor, J.N.K.V.V., Jabalpur	2004
34	Narshingpur	Vice Chancellor, J.N.K.V.V., Jabalpur	2004

J.N.K.V.V. : Jawaharlal Nehru Krishi Vishwa Vidyalaya

2.15 The above table shows that during the Tenth Plan period [2002-2007] 18 new K.V.Ks. have been constituted in Madhya Pradesh to cater to the requirement of the state as enumerated in the strategies of the Tenth Plan for agriculture development.

# CHAPTER THREE

## Frame and Methodology of the Study

3.1 The Centre for Rural Development and Environment [C.R.D.E.], Bhopal, an N.G.O. consisting of dedicated persons of multi disciplinary areas has taken up an impact study on “Development of Agriculture and Allied Activities in Madhya Pradesh through Krishi Vigyan Kendras [Agriculture Science Centres] having the basic objective to assess the impact of the transfer of agriculture technology over the crop production on one hand and the development of activities allied to agriculture on the other. The study has been funded by the Planning Commission, Government of India [G.O.I.] vide their sanction letter no. 0-15012/57/03-SER, dated 6<sup>th</sup> September, 2004 for Rs. 6,17,000.00.

### THE FRAME

3.2 The study has covered six number of K.V.Ks. which have completed minimum of five years of functioning. It is generally understood that at least five years of continuous functioning of any institution yield results in the form of impact over its periphery. The criteria for selection of K.V.Ks. are : -

- Each K.V.K. to represent one or more than one Agro-Climatic Zone. At present the State of Madhya Pradesh has been divided into eleven Agro-Climatic Zones.
- The six K.V.Ks. have been selected from the North, South, East and West parts of the State to have adequate representation of the area.
- The six K.V.Ks. have been selected from among K.V.Ks. run by the Jawaharlal Nehru Krishi Vishwa Vidyalaya [J.N.K.V.V.], Jabalpur [three numbers], Indian Council of Agriculture Research [I.C.A.R.], Govt. of India [one number] and N.G.Os. [two numbers].

The table below gives the details of the six K.V.Ks. : -

**Table No. 3.1**  
**Details of Selected Six K.V.Ks.**

Sl. No.	Name of the district where K.V.K. is located	Name of the host organisation	Year of establishment	Agro-climatical Zone covered
1	Bhopal	ICAR, GoI	1979	Vindhya Plateau
2	Tikamgarh	J.N.K.V.V., Jabalpur	1994	Bundelkhand Region
3	Chhindwara	J.N.K.V.V., Jabalpur	1983	Satpura Plateau
4	Shahdol	J.N.K.V.V., Jabalpur	1992	Northern Hill Region
5	Indore	N.G.O.	1976	Malwa Plateau
6	Satna	N.G.O.	1992	Kymore Plateau and Satpura Hills

3.3 Three adopted villages from each K.V.K. where the agriculture scientists have provided new technology through training, demonstration and other extension activities have been selected.

3.4 Two cluster of villages from each adopted village have been identified to study the impact of flow benefits.

3.5 One control group village from each K.V.K. area has been selected where there is no interference to K.V.K. The purpose is to compare the development scenarios in areas of involvement of K.V.Ks. [adopted and cluster group of villages] and area of non-involvement [control village].



The frame of the study, therefore,

a.	No. of K.V.K.	-	6
b.	No. of adopted villages	-	3 x 6 = 18
c.	No. of cluster villages	-	2 x 3 x 6 = 36
d.	One control group village from each K.V.K.	-	1 x 6 = 6

The total number of villages covered is sixty.

## THE METHODOLOGY

3.6 The methodology consists of the details of schedules to be canvassed for collection of information as given hereunder : -

### VILLAGE SCHEDULE

3.7 This schedule has been canvassed to all the Adopted Villages [18], Cluster of Villages 36 and Control Group of Villages 6

### ADOPTED VILLAGES

3.8 These are the villages where it is mandatory on the part of the Krishi Vigyan Kendras [K.V.Ks.] to transfer the technology relating to agriculture and its allied sectors. These villages are taken as nucleus villages.

### CLUSTER GROUP OF VILLAGES

3.9 These are peripheral villages around the adopted villages where the flow benefits of the K.V.K. reach through the efforts of either K.V.K. functionaries or K.V.K. beneficiaries.

### CONTROL GROUP OF VILLAGES

3.10 These are the villages where there are no interventions of K.V.Ks.

3.11 The information collected through Village Schedule will clearly bring out the present economic, social and cultural scenarios of above mentioned three groups of villages which is necessary to assess the extent of absorption capacity of the technology transfer.

### HOUSE LISTING SCHEDULE

3.12 The information in the House Listing Schedule will be collected from all the sixty villages, i.e. :-

Adopted villages	-	18
Cluster of villages	-	36
Control Group of villages	-	<u>06</u>
		<u>60</u>

3.13 The House Listing Schedule will serve as frame of the study on the basis of which 25 percent of sample households will be selected for detailed enquiry.

## **HOUSEHOLD SCHEDULE**

3.14 The schedule will consist of 25 percent of households taken from House Listing Schedule. The following is the magnitude of sample design : -

Adopted villages	-	25% of the households
Cluster of villages	-	25% of the households
Control Group of villages	-	25% of the households

Schedule wise details are given below : -

### **HOUSEHOLD SCHEDULE – A – GENERAL PARTICULARS**

3.15 This schedule will be uniformly canvassed to all Adopted Villages, Cluster Group of Villages and Control Group of Villages.

### **HOUSEHOLD SCHEDULE – B**

3.16 This schedule will only be canvassed among Adopted Villages and Cluster Villages to capture information regarding Vocational Training, Front Line Demonstration and On Farm Testing. These are the three mandatory functions of K.V.Ks. that bring about change in the agriculture scenario of the district where K.V.K. is located. The schedule dealt in detail the parameters like crop production [Agronomy], Horticulture, Live Stock and Dairying, Poultry, Fisheries Development, Home Science, Training of Rural Youth, Agro-forestry, Organic Farming and Watershed Activities. These activities are more or less common to Vocational Training, Front Line Demonstration and On Farm Testing.

### **HOUSEHOLD SCHEDULE – C**

3.17 This schedule will be canvassed to only control village where there is no intervention of the K.V.K. The items of information are more or less the same as used for collecting information from beneficiary families.

### **HOUSEHOLD SCHEDULE–D–HOUSEHOLD CONSUMER EXPENDITURE**

3.18 This schedule will be canvassed uniformly to adopted, cluster and control group of villages to analyse the consumption pattern both in beneficiary and non-beneficiary villages as consumption pattern is one of the important indicators of standard of living.

## **INDIVIDUAL QUESTIONNAIRE**

3.19 This Questionnaire consists of 25 percent of individuals taken from Household schedule. The following is the details of the sampling design : -

Adopted villages	-	25% of the individuals
Cluster Group of villages	-	25% of the individuals
Control Group of villages	-	25% of the individuals

3.20 The following criteria has been followed to identify the individuals : -

- The individual should be the adult member of the family and preferably an earning member.
- He should be associated with any of the programme of the K.V.K. For individuals from control group of villages this criterion is not applicable.
- He should be literate, may be without having any formal education.

The same criteria are applicable for selection of 25 percent of households.

#### **INDIVIDUAL QUESTIONNAIRE – A**

3.21 This Questionnaire pertains to only identified individuals from Adopted and Cluster Group of Villages. The Questionnaire has been divided in to : -

- General Particulars
- Economic Scenario
- Social Scenario
- Cultural Scenario
- General

#### **INDIVIDUAL QUESTIONNAIRE – B**

3.22 This Questionnaire is meant to be canvassed to the identified individuals from Control village where there is no intervention of K.V.K.

#### **COLLECTION OF SECONDARY DATA**

3.23 A schedule has been specifically designed for the collection of secondary information from six identified K.V.Ks.

3.24 The Chapter Plan of the study, though strictly can not form a part of methodology, but it has been mentioned here to define the premise of the study in broad manner.

3.25 The subsequent six chapters has been devoted to study the impact of K.V.Ks. over the agriculture scenario of the districts. After that an inter comparison of the performance of the K.V.Ks. hosted by I.C.A.R., J.N.K.V.V. and N.G.Os. has been attempted. The performance of the 60 villages covered by the six K.V.Ks. has been compared with the State averages through a separate chapter. The experiences of six K.V.Ks. along with their suggestions have been presented in a separate chapter. The last chapter has been dealt with probable solutions.

# CHAPTER FOUR

## KRISHI VIGYAN KENDRA - BHOPAL

The Premise

4.1 The present chapter has been categorized into : -

- General particulars of the district.
- Details of Krishi Vigyan Kendra based on secondary information.
- Results of the survey.

The above mentioned sequence will, generally, be followed for the subsequent chapters dealing with individual K.V.K.

### GENERAL PARTICULARS OF THE DISTRICT

4.2 Located in between 23.07<sup>0</sup> to 23.54<sup>0</sup> north latitude to 77.12<sup>0</sup> to 77.40<sup>0</sup> east longitude, the district is situated in the south-west part of the State of Madhya Pradesh with total geographical area of 2772.40 squ.km. constituting 0.90 percent of the total geographical area of the State.

4.3 Bhopal being the capital city of Madhya Pradesh has the head quarters of almost all the government departments with secretariat as an apex body of all administrative functions.

4.4 The Bhopal district has 505 inhabited villages with 194 Gram Panchayats delegated with various powers of administration in view of 73<sup>rd</sup> constitutional amendment. The district has two development Blocks and two tahsils that indicate for area wise smallness of the district along with 35 number of police stations for administration of law and order.

4.5 The average annual rainfall of the district is around 1100 m.m., mainly concentrated over the months of June to September and mainly received from the monsoon winds coming from Arabian Sea. The average maximum temperature during summer is around 41<sup>0</sup> Celsius while average minimum temperature during winter is around 10<sup>0</sup> Celsius. Over the years the district has come within the category of extreme climate which otherwise used to be a pleasant area of moderate climate.

4.6 The total population of the district as per census 2001 is 1843510 which is 3.80 percent to the total population of the State. Of the total population of the district the total rural population is 360792 persons constituting 19.57 percent to total population of the district while urban population is 1482718 which is 80.43 percent to total population. The percentage of scheduled caste population to total population as per census 2001 is 14.00 while that for scheduled tribe population is 2.24. The percentage of population within the age group of 15 to 59 years of age [considered to be the labour force] is 55.31 that indicates broadly the magnitude of the problem of providing gainful employment to the employment seekers. **The total number of persons engaged in agriculture occupation [both main and marginal] in Bhopal district as per census 1991 is 93031 constituting 5.05 percent to total population and 25.79 percent to rural population. The lesser percentage of population of farming community clearly shows that agriculture is not the main stay of the population of Bhopal district.** The following indicators relating to agriculture will further show the extent of agriculture activities in Bhopal district.

Table No. 4.1  
Important Indicators Relating to Agriculture

Sl. No.	Indicators	District Bhopal	State of Madhya Pradesh
1	2	3	4
1	Percentage of forest area to total geographical area, ha	15.83	26.65
2	Net cropped area as percent to total geographical area, ha	57.19	49.02
3	Per-capita net cropped area [Hect.]	0.08	0.25
4	Per-capita gross cropped area [Hect.]	0.12	0.34
5	Percentage of double cropped area to net cropped area, ha	45.91	35.49
6	Net area irrigated as percent to net cropped area, ha	48.43	37.56
7	Gross area irrigated as percent to gross cropped area, ha	33.19	28.54
8	Per-capita production of food-grains [Kg.]	100	266
9	Per hectare use of fertilizer [Kg.]	62.25	46.21
10	Gross value of agriculture produce-per hect. [Rs.]	11701	11968
11	Per hectare yield of agriculture produce [Kg.]*		
a)	Paddy	727	1058
b)	Wheat	1837	1867
c)	Jowar	1216	1342
d)	Maize	1566	2072
e)	Gram	1002	932
f)	Tuar	550	825
g)	Soybean	1076	1132
12	Electrified villages as percent to total inhabited villages	100	97.04
13	Energised pump sets per thousand hectare	73	60

\*Figures relate to the year 2003-2004 [Final Forecast]

- 4.7 One typical indication as derived from the above table is that though in indicators like percentage of double cropped area to net cropped area, net area irrigated as percent to net and gross cropped area the position of Bhopal district is ahead of the State but per hectare yield of most of the crops is lower than the State average which is mainly due to the drought conditions at Bhopal for the last two years.

#### **DETAILS OF KRISHI VIGYAN KENDRA, BHOPAL BASED ON SECONDARY INFORMATION**

- 4.8 Established in the year 1979 the K.V.K. is located in the Nabibagh, Berasia Road area of the capital city of Bhopal. The institution is being run under the supervision of Central Institute of Agriculture Engineering, Government of India with Director as the head of the institution. The K.V.K. at present has 12 number of technical personnel and four number of non-technical personnel. The technical staff consists of Training Associates and one Principal Scientist as incharge of the institution. The K.V.K. has its own administrative building with the existence of farmers hostel and threshing floor. Besides, the K.V.K. has its own demonstration units relating to dairy, poultry and farm pond for aquaculture etc. The farm area of the K.V.K. is 20 hectare – entirely cultivated and irrigated. It has 2 number of wells, 4 number of tube –wells, 2 number of farm ponds and 6 number of electrically energized pump sets. As on the date of the survey the institution has 2 number of jeeps and one bus.
- 4.9 The K.V.K. has adequate number of agricultural implements as detailed below;

- |                    |  |
|--------------------|--|
| 1. Tractor – 1     | 8. Thresher – 2                        |
| 2. Trolley – 1     | 9. Leveller – 1                        |
| 3. Harvester – 2   | 10. Tractor drawn ferti-seed drill – 2 |
| 4. M.B. Plough – 2 | 11. Planter – 2                        |
| 5. Cultivator – 2  | 12. Power Weeder – 2                   |
| 6. Bund Farmer – 1 | 13. Hand Weeder – 50                   |
| 7. Scrapper – 1    | 14. Hort. Implements/tools – 2 sets    |

These variety of implements are, more or less, sufficient to do the extension work with reasonable efficiency.

- 4.10 Regarding budget allocation, the K.V.K. receives an average allocation of Rs. 31.35 lakh per year against which the average expenditure is around Rs. 29.21 lakh per-annum. The table below shows the details;

Table No. 4.2  
Budget Allocation and Expenditure

Sl. No.	Particulars	2001-2002		2002-2003		2003-2004		Remarks
		Allocation	Expend.	Allocation	Expend.	Allocation	Expend.	
1	2	3	4	5	6	7	8	9
<b>I.</b>	<b>RECURRING ITEMS</b>							
1	Pay and Allowances	23.00	23.80	25.00	25.56	30.00	29.50	
2	Travelling Allowances	0.50	0.27	1.00	0.31	0.80	0.30	
3	Contingencies	2.05	1.97	3.10	1.33	4.10	4.60	
	<b>Total – I</b>	<b>25.55</b>	<b>26.04</b>	<b>29.10</b>	<b>27.20</b>	<b>34.90</b>	<b>34.40</b>	
<b>II.</b>	<b>NON-RECURRING ITEMS</b>							
4	Equipments	-	-	-	-	4.50	-	Tractor replacement
	<b>Total – II</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4.50</b>	<b>-</b>	
	<b>Grand Total I+II</b>	<b>25.55</b>	<b>26.04</b>	<b>29.10</b>	<b>27.20</b>	<b>39.40</b>	<b>34.40</b>	

- 4.11 The above table shows the matching trend of expenditure against the allocation with gradual increase in allocation to cover-up cost over-runs.

- 4.12 The information regarding Technical performance has been collected under the heads of;

- Vocational Training
- In-service Training
- Front Line Demonstration
- On Farm Testing.

4.13 In what follows an attempt has been made to present the details of the above mentioned items of technical performance.

## VOCATIONAL TRAINING

4.14 Being one of the important items of the training, this method is not only limited to aspects of agriculture only but extends to cover-up areas for providing self-employment. The table below shows the details;

**Table No. 4.3**  
**Status of Vocational Training**

Sl. No.	Subject	No. of training in 2003-2004			Total no. of trainees 2003-2004
		Adopted Villages	Cluster Villages	Other Villages	
1	2	3	4	5	6
1	Crop Production	10	6	4	398
2	Horticulture	9	4	4	319
3	Plant Protection	6	4	0	173
4	Veterinary Services	8	0	0	233
5	Home Science	3	0	0	42
6	Ag. Engineering	5	0	0	125
7	Training of Rural Youth for Self Employment				
a.	Horticulture	2	2	1	49
b.	Ag. Engineering	4	3	1	75
c.	Animal Science	1	2	2	66
d.	Home Science	2	2	8	211
	Total	50	23	20	1691

Note : Other villages [Col. 5] indicate those villages of the district where the training programmes of the Agriculture Department are imparted through K.V.K.

4.15 The above table shows that total number of training programmes organized relating to vocational training in the year 2003-2004 was 93 which was satisfactory. The subjects like crop production, horticulture and veterinary services attracted the maximum number of trainees i.e. 23.54 percent, 18.86 percent and 13.78 percent to the total number of trainees respectively which seems obvious in view of the basic objective of the K.V.K. for enhancing agriculture production and making its services more viable. **The total number of 401 trainees [23.71%] participating in various self employment oriented training programmes in one year is indicative of the fact that the villagers are not very confident of such trainings which hardly guarantee any placement. They usually find such efforts per-functory. However, participation of 211 trainees [mostly females] in programmes relating to home science is somewhat encouraging from the view point of self employment.**

## IN SERVICE TRAINING

4.16 In service training is provided to the field functionaries of Agriculture, Veterinary, Horticulture and Forest Departments. The following table shows the details of the training provided.

Table No. 4.4  
Status of In-service Training

Sl. No.	Subject	No. of training 2003-2004		Total number of trainees 2003-2004
		On campus	Off campus	
1	2	3	4	5
1	Horticulture	1	-	24
2	Agriculture Engineering	5	-	63
	Total	6	-	87

**4.17 Though the number of training programmes conducted in the year 2003-2004 is satisfactory but the inclusion of more subjects like Crop Production and Home Science would have been more fruitful.**

#### FRONT LINE DEMONSTRATION

4.18 The special features of front line demonstrations are;

- These demonstrations are conducted under the close supervision of the scientists of the KVK.
- Only newly released technologies or those likely to be released in near future are selected for the front line demonstrations.
- Front line demonstrations are organized in a block of two to four hectares of land involving all those farmers whose plots fall in the identified demonstration blocks.
- Only critical inputs and training are provided from the scheme budget.

Remaining inputs are supplied by farmers themselves.

- The target audience of front line demonstrations is both farmers and the extension officers.
- Front line demonstrations are supposed to generate data relating to factors leading to higher crop yields and constraints under various farming conditions.

4.19 The table below shows the number of front line demonstrations conducted during the year 2003-2004.

Table No. 4.5  
Status of Front Line Demonstrations

Sl. No.	Subjects	No. of demonstrations 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Pulses	24	20
2	Oil Seeds	20	28
3	Other than pulses and oilseeds	87	94
	Total	131	142

**4.20 The total number of demonstration both in adopted and cluster group of villages which comes to 273 in the years 2003-2004 is some what satisfactory. The demonstrations in the other group mainly concentrated over wheat, brinjal, cauliflower and tomato.**



## **ON FARM TESTING**

4.21 On farm testing is a part of adaptive research that takes into account existing technology and its application over defined areas and defined group of farmers.

4.22 The procedure of on farm testing has five steps viz.,

- Diagnosis
- Planning
- Experimentation
- Assessment/evaluation of results
- Recommendation and diffusion.

## **DIAGNOSIS**

4.23 In this step, an understanding of farmer's circumstances and practices is developed in order to understand the farming system, possible productive problems and offer possible solutions. It is a continuous process practiced in every cycle of research. Normally the Participatory Rural Appraisal [P.R.A.] technique is used for having an insight into the problems of farming communities.

## **PLANNING**

4.24 The planning involves setting-up of priorities in order to improve research efficiency in terms of research benefits/costs by identifying following kinds of problems;

- Problems causing large productive loss.
- Problems that occur frequently.
- Problems that affect many farmers and their major crops.

## **EXPERIMENTATION**

4.25 This step includes exploring production problems, testing possible solutions and demonstrating them on the farms.

## **ASSESSMENT**

4.26 Under this phase the results of on farm testing are analysed taking primarily into consideration the reactions and opinions of farmers. The results of the assessments are then used to plan future research.

## **RECOMMENDATION AND DIFFUSION**

4.27 On the basis of on farm testing the researchers formulate recommendations/ non-recommendations for demonstration on larger area. The diffusion of new technology is done mainly by the **farmer's who** once convinced of the benefits of new technology advise their fellow cultivators to adopt the system.

4.28 Against the background of above mentioned procedure the status of "On Farm Testing" in the year 2003-2004 has been shown in the following table;

Table No. 4.6  
Status of On Farm Testing

Sl. No.	Subject	No. of demonstration 2003-2004	
		Adopted Villages	Cluster group of Villages
1	2	3	4
1	Integrated weed management in Soybean	10	10
2	IPM in Soybean	10	10
3	Diversification in Soybean	10	10
4	Balanced fertilizer [IPNM] in Soybean	10	10
5	IPM for pod borer in Chickpea and Pigeonpea	10	10
6	Integrated wilt management in Chickpea and Lentil	10	10
7	IPM shoot and fruit borer in Brinjal	10	10
8	Inter cropping in Mango Orchard	10	10
9	Control of citrus cancer in Lemon	10	10
10	Control of leaf curl virus in solanaceous vegetables [Potato, Chilli, Brinjal, Tomato]	10	10
	Total	100	100

#### **IPM – Integrated Pest Management**

**4.29 The number of “On Farm Testing” being 100 in the year 2003-2004 is somewhat satisfactory.** The spread of existing technology particularly that of pest control through forward linkages by the farmers who must have extended the knowledge to their fellow farmers has definitely made a dent towards arresting the spread of pest in the crop, thereby improving the quality of agriculture production. **However a continuous monitoring of the impact of On Farm Testing is necessary to keep a record of the positive effects of such efforts.**

4.30 Besides organizing training courses as laid down in the mandate of K.V.K. i.e. Vocational Training, In-service Training, Front Line Demonstration and On Farm Testing, the K.V.K., Bhopal has also organized various other training programmes in liaison with departments of the state government. The table below shows the details;

Table No. 4.7  
Record of other Training Courses

Sl. No.	Topic	Duration Days	2001-2002		2002-2003		2003-2004		Remarks
			No. of training courses	No. of participants	No. of training courses	No. of participants	No. of training courses	No. of participants	
1	2	3	4	5	6	7	8	9	10
1	Crop Production	2	9	336	6	164	5	198	Directorate of Agriculture
2	Women in Agriculture	6	3	118	-	-	-	-	M.P. Mahila Arthik Vikas Nigam
3	Plant Protection	2	1	45	9	23	8	293	NATP
4	Horticulture	2	4	205	1	15	1	10	NATP
5	Ag. Engineering	2	3	100	3	81	2	21	NATP
6	Animal Science	2	7	353	2	25	1	34	NATP
7	Medicinal Crops	7	-	-	1	50	2	63	Directorate of Horticulture
8	Organic Farming	2	-	-	2	84	-	-	NATP
9	IPNM	2	-	-	-	-	4	226	NATP and Directorate of Agri., M.P.
10	Agro-forestry	2	-	-	-	-	1	23	NATP
11	Water Management	2	-	-	-	-	3	97	NATP
	<b>Total</b>	-	<b>27</b>	<b>1157</b>	<b>24</b>	<b>442</b>	<b>26</b>	<b>965</b>	

**IPNM – Integrated Pest and Nutrition Management**

**NATP – National Agriculture Technology Project**

4.31 The above table shows that most of the training courses organized had the duration of two days only which, basically, gives an impression that such courses were organized as a matter of formality to achieve certain target instead of transacting business sincerely. **Every training programme may be minimum of four days with maximum participation of 35 persons to make the business transaction meaningful.** The above table brings out one fact very clearly that farmers are more interested in the programmes like crop production, plant protection, horticulture and animal science which persistently attracted more number of farmers. The programmes like organic farming, agro-forestry and water management were not very popular as the participation by the farmers were poor. **Therefore, it is suggested to concentrate more on programmes like crop production, women in agriculture, plant protection, horticulture, agriculture engineering and animal science as these are the core spheres meaningful to farmers as a source of their income. Gradually the training schedule may be extended to cover the areas of organic farming, medicinal crops agro-forestry and water management. The above suggestion is substantiated by the fact that since in Madhya Pradesh 59.33 percent of land holdings belong to marginal and small farmers, intensive emphasis on training relating to crop production is required to enhance the agricultural income. Once the agriculture becomes sustainable to such categories of farmers the shift in emphasis over organic farming, medicinal crop rearing etc may be attempted.**

4.32 One of the important functions of the K.V.K. is to conduct specific research to improve the agriculture production both quantitatively and qualitatively. The table below shows the details;

Table No. 4.8  
Status of Specific Research

Sl. No.	Topic of Research	Year	Impact over		
			Production	Pest Control	Improved Animal Breed
1	Optimising Planting Density in Soybean, Groundnut and Pigeon Nut	2002-2004	30-50% increase over F.P.	Reduced by 7%	
2	Integrated Weed Management of Soybean	2002-2004	50% increase over F.P.	Reduced by 80%	
3	Development of IPNM system for Soybean, Wheat	2002-2004	44% increase over F.P.	-	-
4	Alternative crops/ cropping system for Soybean	2002-2004	100%	Reduced by 36.6%	
5	I.P.M. for pod borer in pulses	2002-2004	60%	Reduced by 25%	
6	Agri - Hort. System	2002-2004	25.30%	-	
7	Integrated Animal Production system	2002-2004	100%	Reduced by 41%	Increased by 10-15%

#### FP – Farmers Practice

4.33 The impact of the specific research as mentioned above is satisfactory.

4.34 Each K.V.K. is supposed to hold the meeting of **Scientific Advisory Committee** twice in a year for performing following functions;

- Providing necessary guidance and leadership in developing infrastructure facilities and thereby supporting the Kendra to fulfil its objectives.
- Reviewing of the annual and five year plans of the Kendra.
- Reviewing the progress of the activities and achievements and offering necessary guidance/suggestions to improve the functioning of the Kendra.
- Approval of the Annual Accounts of the Kendra before the same is sent to the Chartered Accountant/Statutory Auditor for audit.
- Adoption of the Statement of Audited Accounts before the same is sent to the Council.
- Approval of the recommendations of the Recruitment/Selection committee for appointment of staff on vacant posts.

4.35 The Scientific Advisory Committee will consist of following members;

1.	Head of the host institution	Chairperson
2.	Director, Extension of concerned SAU	Member
3.	Zonal Coordinator of the concerned zone	Member
4.	Representative of ICAR Instt./ICAR Regional Research Station if located in the district or nearby	Member
5.	Associate Director Research & Extension of the Zonal Research Station in which KVK is located	Member
6.	District officers of the line departments such as Agriculture, Horticulture, Animal Husbandry, Soil conservation, Social/Agroforestry, Sericulture, Fisheries, Irrigation, Social Welfare, Small Scale Industries etc.	Members
7.	Representative of the Lead Bank of the District	Member
8.	Farm Radio Officer of the AIR in which KVK is located	Member
9.	Representative of Doordarshan Centre in which KVK is located	Member
10.	Two representatives of the farmers - one small and one big nominated by the Head of the Institution	Member
11.	Two representatives of Farm Women nominated by Head of the Institution	Members
12.	Training Organiser, KVK	Member Secretary

4.36 The K.V.K., Bhopal has conducted the meeting twice in a year as laid down by I.C.A.R. and availed necessary guidance for preparing Five Year Plans of the Kendra and other administrative guidance for efficient functioning of the K.V.K.

4.37 The K.V.K., Bhopal has continuously interacted with district administration, three-tier system of Panchayati Raj Institutions and progressive cultivators of the district and took valuable guidance from them. Publicity measures like organizing Kisan Melas, Field Days, use of Audio-Visual Aids, arranging T.V. Interviews and Radio talks were attempted to spread the knowledge about utility of K.V.K. among rural population.

## **RESULTS OF THE SURVEY – VILLAGE PARTICULARS**

4.38 As stated earlier the study has covered sixty villages @ ten villages per K.V.K. with following bifurcations;

- Three numbers of Adopted Villages.
- Six numbers of Cluster Villages.
- One number of Control Village.

The bifurcation as shown above is common to all the six K.V.Ks. covered under the study. The table below gives a few important demographic details of the selected villages of K.V.K., Bhopal;

Table No. 4.9  
Demographic Particulars

Sl. No.	Name of the Village	Name of the Development Block	No. of households as on date survey	Total population Census 2001	Of which		Proportion of S.C. population [%]	Proportion of S.T. population [%]	Literacy rate [%]	Household size
					Males Census 2001	Females Census 2001				
1	2	3	4	5	6	7	8	9	10	11
<b>ADOPTED VILLAGES</b>										
1	Khajuri	Phanda	121	941	503	438	14.30	7.70	62.00	6
2	Polashgunj	Berasiya	51	349	205	144	12.57	5.16	52.97	6
3	Mugliahat	Phanda	310	1867	964	903	24.90	-	58.80	6
<b>Total – I</b>			<b>482</b>	<b>3157</b> [35.96]	<b>1672</b> [35.90]	<b>1485</b> [36.03]	-	-	-	-
<b>CLUSTER VILLAGES</b>										
4	Sonkatch	Berasiya	109	751	397	354	37.90	12.30	57.70	5
5	Kolukhedi	Berasiya	81	497	273	224	27.00	4.20	66.50	5
6	Kurana	Phanda	131	1677	882	795	52.50	1.30	54.90	6
7	Ratatal	Phanda	119	656	364	292	7.80	-	52.60	6
8	Ratibad	Phanda	49	335	170	165	10.40	1.50	59.90	5
9	Khamkhedi	Phanda	215	1408	733	675	34.40	3.10	56.90	6
<b>Total – II</b>			<b>704</b>	<b>5324</b> [60.66]	<b>2819</b> [60.54]	<b>2505</b> [60.79]	-	-	-	-
<b>CONTROL VILLAGE</b>										
10	Manikhedi Kot	Phanda	59	297	166	131	7.70	-	53.20	6
<b>Total – III</b>			<b>59</b>	<b>297</b> [3.38]	<b>166</b> [3.56]	<b>131</b> [3.18]	-	-	-	-
<b>Grand Total I+II+III</b>			<b>1245</b>	<b>8778</b> [100]	<b>4657</b> [100]	<b>4121</b> [100]	-	-	-	-

Source – Census 2001

Note – Figures in brackets show percentage to total.

**4.39** The total population of the ten identified villages as per census – 2001 is 8778 constituting 2.59 percent of the total rural population of district Bhopal. The adopted villages cover 35.96 percent of the population as compared to total population of ten identified villages covered under the study while for the cluster villages the percentage population to total population of ten villages is 60.66 and that for control village the percentage is 3.38. The largest village, population wise is Mugalia Hat [1867 persons] while the smallest village is Ratibad [335 persons]. The preponderance of males over females in ten identified villages is obvious as the sex ratio [female per 1000 males] ranged between 971 in village Ratibad to 789 in village Manikhedi Kot. In all the villages the percentage of S.C. population is more than the S.T. population. The literacy rate that ranged between 52.60 percent in village Ratibad to 66.50 percent in village Kolukhedi is close to the district percentage literacy level of 64.27 and state level of 64.11 percent. The impact of the proximity of the capital city of Bhopal has reflected over the literacy levels. Similarly the average size of the household being 6 persons is mainly due to the positive impact of family welfare measures implemented over the years.

## WORK FORCE

**4.40** An analysis of the information regarding workforce for all the ten villages covered under the study will give an idea of the persons engaged in different occupation and also the extent of dependent population not pursuing any occupation. The table below shows the details;

Table No. 4.10  
Status of Work Participation

Sl. No.	Name of the Village	Work participation rate [%]			Proportion of main workers [%]			Proportion of Marginal workers [%]			Proportion of Non-workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Khajuri	29.10	45.10	10.70	26.80	41.60	9.80	2.30	3.60	0.90	70.90	54.90	89.30
2	Polashgunj	42.90	32.80	11.50	21.90	32.70	5.10	24.00	12.60	38.90	52.10	46.10	55.90
3	Mugaliahat	48.00	52.10	43.60	20.20	35.90	3.50	27.70	16.20	40.10	52.00	47.90	56.40
<b>CLUSTER VILLAGES</b>													
4	Sonkatch	40.90	48.10	32.80	30.80	39.00	21.50	10.10	9.10	11.30	59.10	51.90	67.20
5	Kolukhedi	24.10	39.20	5.80	17.10	28.20	3.60	7.00	11.00	2.20	75.90	60.80	94.20
6	Kurana	35.20	44.70	24.80	18.90	31.70	4.70	16.30	12.90	20.10	64.80	55.30	75.20
7	Ratatal	44.40	50.30	37.00	29.00	40.70	14.40	15.40	9.60	22.60	55.60	49.70	63.00
8	Ratibad	56.40	58.20	54.50	26.90	44.70	8.50	29.60	13.50	46.10	43.60	41.80	45.50
9	Khamkheda	34.20	44.20	23.30	25.70	43.20	6.70	8.50	1.00	16.60	65.80	55.80	76.70
<b>CONTROL VILLAGE</b>													
10	Manikhedi Kot	56.90	55.40	58.80	37.40	34.30	41.20	19.50	21.10	17.60	43.10	44.60	41.20

Source – Census 2001

4.41 The above table shows that the work participation rate which ranged between 24.10% in village Kalukhedi to 56.40% in village Ratibad is, in general, more among males than females. In villages Ratibad and Manikhedi Kot where female work participation rate is 54.50 percent and 58.80 percent respectively is somewhat remarkable that shows the awareness among female population about value of work for augmenting family income. The proportion of marginal workers as compared to main workers is usually low that shows the dearth of avenues of subsidiary occupations in our area of study. Generally proportion of female marginal worker is more than males which seems obvious as the females take up jobs to fill-up their spare hours for enhancing family income. **The proportion of non-workers, which ranged between 43.10% in village Manikhedi Kot to 75.90 percent in village, Kolukhedi presents a dismal picture as it shows the higher number of dependent population consisting of children, old persons and in firms who are not in a position to contribute much towards family income.**

4.42 In all the ten number of villages covered under the study, agriculture remains to be the main occupation. The table below shows the occupational distribution;

Table No. 4.11  
Occupational Distribution

Sl. No.	Name of the Village	Proportion of Cultivators to total Workers [%]			Proportion of Agr. Labourers to total workers [%]			Proportion of workers in household industries to total workers [%]			Proportion of other workers to total workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Khajuri	32.80	37.90	8.50	29.20	30.00	25.50	1.50	1.80	0.00	36.50	30.40	66.00
2	Polashgunj	50.90	51.10	49.90	32.00	29.50	40.90	2.90	3.00	0.00	32.00	29.90	27.00
3	Mugaliahat	52.50	52.20	52.80	33.70	27.30	41.90	4.60	5.60	3.30	9.30	14.90	2.00
<b>CLUSTER VILLAGES</b>													
4	Sonkatch	32.20	33.50	30.20	47.20	40.30	58.60	9.40	9.40	9.50	11.10	16.80	1.70
5	Kolukhedi	57.50	57.00	61.50	29.20	28.00	38.50	0.80	0.90	0.00	12.50	14.00	0.00
6	Kurana	41.60	41.10	42.60	37.70	31.70	49.70	1.40	2.00	0.00	19.30	25.10	7.60
7	Ratatal	41.90	49.20	29.60	47.40	36.10	66.70	0.00	0.00	0.00	10.70	14.80	3.70
8	Ratibad	57.10	57.60	56.70	33.90	30.30	37.80	0.50	1.00	0.00	8.50	11.10	5.60
9	Khamkheda	40.10	42.90	34.40	41.60	35.20	54.80	0.00	0.00	0.00	18.30	21.90	10.80
<b>CONTROL VILLAGE</b>													
10	Manikhedi Kot	61.50	56.50	67.50	32.50	35.90	28.60	0.00	0.00	0.00	5.90	7.60	3.90

Source – Census 2001

4.43 The proportion of cultivators to the total workers ranged between 32.20 percent in village Sonkatch to 61.50 percent in village Manikhedi Kot while the proportion of agricultural labourers to total workers ranged between 29.20 percent in villages Khajuri and Kolukhedi to 47.40 percent in village Ratatal. Usually the proportion of cultivators to main workers is more than that of agricultural labour. With the exception of the villages Mugaliahat, Kalukhedi, Kurana and Monikhedi Kot, in the rest of the villages the proportion of male cultivators is more than that of female while in villages Kolukhedi and Manikhedi Kot the proportion of female cultivators is much higher, which is an encouraging indicator that indicates the positive role of females, associating themselves with their male counterpart to enhance family income. The proportion of female agricultural labourer, in general, is higher than that of males which confirms one basic fact that males from such category usually do some odd jobs or migrate to the nearby towns in search of work while their female counterpart continues with various functions of agricultural labour like harvesting, threshing etc. The situation of proportion of workers in household industries to total worker is far from being encouraging as it ranged between 0.90 percent in village Kolukhedi to 9.40 percent in Sonkatch. In villages like Ratatal, Khamkheda and Manikhedi Kot secondary sector occupations are not existing. Usually in India in general and in Madhya Pradesh in particular the status of secondary sector occupations in villages is poor. One of the important factors of rural poverty is absence of such occupations that encourage migration during lean season of agriculture. Such sort of secondary occupation may be encouraged through proper implementation of various welfare schemes particularly relating to rural development being run by the government. Similarly the proportion of other workers to total workers which ranged between 5.90 percent in village Manikhedi Kot to 36.50 percent in village Khajuri indicates the preponderance of odd jobs with urban orientation that induces a particular portion of the work force to remain in nearby urban areas because of the lack of full time employment in agriculture. **What is therefore required is the encouragement of**



household industries through various subsidy schemes of the government to arrest the migration among agriculture labourers and persons involved in other category of work by enhancing their family income.

## LAND USE DETAILS

4.44 The table below shows the land use details of the identified ten villages covered under the study.

Table No. 4.12  
Land Use Details

*In Hectare*

Sl. No.	Name of Village	Total geographic covered	Gross cropped area	Forest	Not available for cultivation	Cultivable waste land	Irrigation				Total irrigated area	Un-irrigated
							Canal	Pond	Well	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>ADOPTED VILLAGES</b>												
1	Khajuri	373	196 [52.55]	2	175	44	15	-	70	10 (TW)	95 [48.47]	57
2	Polashgunj	356	347 [97.42]	-	15	6	-	-	12	92 (TW)	104 [29.97]	237
3	Mugaliahat	623	585 [93.90]	-	38	57	-	-	96	198 (TW)	294 [50.26]	234
<b>CLUSTER VILLAGES</b>												
4	Sonkatch	640	561 [87.66]	-	79	48	-	-	65	34 (TW)	99 [17.65]	414
5	Kolukhedi	183	162 [88.52]	-	21	13	-	-	50	36 (TW)	86 [53.09]	63
6	Kurana	745	671 [90.07]	-	74	52	-	-	175	200 (TW)	375 [55.89]	244
7	Ratatal	398	236 [59.30]	70	92	68	6	-	27	16 (TW)	50 [21.19]	118
8	Ratibad	403	340 [84.37]	-	63	37	-	-	20	25 (TW)	45 [13.24]	258
9	Khamkheda	772	667 [86.40]	-	105	119	15	-	25	147 (TW)	192 [28.79]	356
<b>CONTROL VILLAGE</b>												
10	Manikhedi Kot	552	452 [81.88]	87	13	7	-	-	13	115 (TW)	228 [50.44]	217
	Total	5045	4217 [83.59]	159	675	451	36	-	553	979	1568 [37.18]	2198

Source – Census – 2001

Note – Col-4 Figures in bracket show percentage to total geographical area.

Col-12 Figures in bracket show percentage to gross cropped area.

4.45 The total gross cropped area of the identified ten villages is 83.59 percent of the total geographical area of ten number of villages that **confirms the fact that the main occupation of these villages is agriculture. The survey area is not rich in forest resources as the total area under forest is only 3.15 percent to total geographical area of the ten identified villages.**

4.46 Regarding irrigation, the percentage of gross irrigated area to gross-cropped area is 37.18 for ten identified villages **which is more than the district average of 33.19 percent and state average of 28.54 percent.** In adopted three villages this figure ranged between 29.97 percent [village Polashganj] to 50.26 percent [village Mugalia hat] whereas in cluster villages this range was between 13.24 percent [village Khamkheda] to 55.89 percent [village Ratatal]. Minikhedi Kot, being a control village having no interference of K.V.K., has this percentage to the tune of 50.44. **The overall status of irrigation is comparatively lagging behind in case of Adopted Villages though not dismal. The selection of such three adopted villages seems justified as the cultivators of such areas having paucity of water need more intensive training for enhancing crop productivity.**

4.47 Cultivable waste land that provides promise for expanding agricultural activities, is 451 hect in identified ten villages which is 8.94 percent to total geographical area. The magnitude of this potential area is quite high in Adopted and Cluster villages as against Control village of Manikhedi Kot where only 7 hectares are under cultivable waste. **The selection of these nine number of villages for intervention of K.V.K. is again justified for expansion of agricultural activities through the inputs of new and already existing technologies.**

## RURAL ELECTRIFICATION

4.48 Un-interrupted and adequate power supply is essential for economic development, particularly in the sectors of agriculture and industry. The table below shows the status of rural electrification in ten identified villages;

Table No. 4.13  
Status of Rural Electrification

Sl. No.	Name of the Village	Villages Electrified		Regular supply		If Regular supply (Actual hrs. of supply)
		Yes	No	Yes	No	
1	2	3	4	5	6	7
	<b>ADOPTED VILLAGES</b>					
1	Khajuri	1	0	0	1	12
2	Polashganj	1	0	0	1	12
3	Mugalia Hat	1	0	0	1	12
	<b>CLUSTER VILLAGES</b>					
4	Sonkatch	1	0	0	1	12
5	Kolukhedi	1	0	0	1	12
6	Kurana	1	0	0	1	12
7	Ratatal	1	0	0	1	12
8	Ratibad	1	0	0	1	12
9	Khamkheda	1	0	0	1	12
	<b>CLUSTER VILLAGE</b>					
10	Manikkhedi Kot	1	0	0	1	10
	<b>Total</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>10</b>	

4.49 The above table shows **that all the ten number of villages covered under the study are electrified with irregular power supply situation** with hours of supply ranging between 10 hours in village Manikhedi Kot to 12 hours in rest of the 9 villages. Looking to the overall power shortage condition of the state the hours of power supply seem tolerable.

4.50 The direct impact of rural electrification is visible in the form of pump sets energized. Since the main occupation of these identified villages is agriculture, energisation of pump sets is a definite support factor for advancement of agricultural scenario of the area. The table below shows the status of pump sets energized.

Table No. 4.14  
Status of Pump Sets Energised

Sl. No.	Name of the Village	Pump set energized	
		Electricity (No.)	Diesel (No.)
1	2	3	4
	<b>ADOPTED VILLAGES</b>		
1	Khajuri	60	12
2	Polashganj	70	2
3	Mugalia Hat	400	20
	<b>CLUSTER VILLAGES</b>	530	34
4	Sonkatch	60	5
5	Kolukhedi	85	7
6	Kurana	180	4
7	Ratatal	300	4
8	Ratibad	50	0
9	Khamkheda	150	20
	<b>CLUSTER VILLAGE</b>	825	40
10	Manikkhedi Kot	35	0
	<b>Total</b>	<b>1390</b>	<b>74</b>

- 4.51 The total number of pump sets energized is 1464 which is 8.65 percent of total number of pump sets energized in district Bhopal that stands at 16,923 for the year 1999-2000. **This is, undoubtedly, a bright picture that denotes sincere effort of the rural population of the identified area for pursuing agricultural occupation.** It is worth mentioning that for district Bhopal the number of energized pump set per thousand hectare is 73 as against the state average of 60 that further underlines the fact of sincere attitude of the farmers of district Bhopal in general towards their occupation relating to agriculture which is their sustainable source of livelihood.
- 4.52 Energisation of pump sets by diesel is less popular than energisation of pump sets through electricity. The total number of pump sets energized ranged between 420 in village Mugalia Hat to 35 Manikheda Kot.
- 4.53 **The above table brings out another fact that in adopted and cluster villages the rate of energisation per village is more than that of control village. The support of K.V.Ks. in these villages is definitely one of the contributory factor since the cultivators are given constant technological input inducing them to resort to better modes of cultivation.**

#### HOUSEHOLD INDUSTRIAL UNITS

- 4.54 **There is complete absence of the existence of any household industrial units in all the ten number of villages covered under the study.** Though the census figures as shown in table no. 4.11 vouch for the presence of such units in scanty manner but such information relates to the year 2001 which with the passage of time might have become none existent or insignificant from income generation point of view. Since the villages are agriculturally advanced any attempt to establish agro-based household industrial units will certainly augment the existing income levels.

## COOPERATIVES

4.55 Cooperative movement in the country is basically aimed at improving the socio-economic status of the weaker section of society and, in turn, arrest the tendency of their exploitation. The important strategies envisaged for the development of cooperative sector in the Tenth Plan are to enhance membership base of the cooperative credit societies to cover hundred percent families engaged in agricultural activities, enhancing availability of loan for purchase of agricultural inputs by the cultivators and emphasis on distribution of dividends among the members. Against such background the status of the existence of cooperative societies in our area of study is not very encouraging. The table below shows the details;

Table No. 4.15  
Cooperative Societies

Sl. No.	Name of the Village	Agri.co-operative credit society	Fisherme n co-operative society	Milk co-operative society	Co-operative, marketing society	Other specify
1	2	3	4	5	6	7
	<b>ADOPTED VILLAGES</b>					
1	Khajuri	0	0	0	0	0
2	Polashganj	0	0	0	1	0
3	Mugalia Hat	0	1	1	1	0
	<b>CLUSTER VILLAGES</b>					
4	Sonkatch	0	0	0	1	0
5	Kolukhedi	0	0	0	0	0
6	Kurana	1	0	1	0	0
7	Ratatal	0	0	0	0	0
8	Ratibad	0	0	0	0	0
9	Khamkheda	0	0	1	0	0
	<b>CLUSTER VILLAGE</b>					
10	Manikkhedi Kot	0	0	0	0	0
	<b>Total</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>0</b>

4.56 Only 8 number of cooperative societies are existing in our area of study. **Village Mugalia Hat has 3 number of cooperative societies which seems somewhat extra-ordinary**, based on the fact that the total population of the village is 1867 persons with work participation rate of 48.00 percent along with proportion of cultivators to total workers as 52.50 percent. The information as contained in the table confirms the extent of awareness of the inhabitants of this village.

4.57 Availability of basic and infrastructural facilities within and around the identified ten villages are important indicators of levels of present development.

## BASIC FACILITIES

4.58 The table below shows the location of basic administrative facilities within and around the ten villages selected for the study;

Table No. 4.16  
Status of Basic Administrative Facilities

Sl. No.	Name of the Village	District head quarter away from the village, km	Tahsil head quarter		Block head quarter		Gram Panchayat		Police station/ sub station	
			Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM
1	2	3	4	5	6	7	8	9	10	11
<b>ADOPTED VILLAGES</b>										
1	Khajuri	16		16		16	0			6
2	Polashganj	22		20		20		4		12
3	Mugalia Hat	23		23		20	0			3
<b>CLUSTER VILLAGES</b>										
4	Sonkatch	23		9		9	0			5
5	Kolukhedi	20		14		14	0	2		2
6	Kurana	17		17		16				3
7	Ratatal	19		19		18		3		7
8	Ratibad	20		20		15	0		0	
9	Khamkheda	17		17		15	0			4
<b>CLUSTER VILLAGE</b>										
10	Manikkhedi Kot	16		16		12		5		6
	<b>Total</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>9</b>

4.59 For all the identified ten villages the location of the district headquarter is a away from the village, ranging between 16 kms [villages Khajuri and Manikkhedi Kot] to 23 kms [village sonkatch]. Similar is the status of distance for tahsil and block head quarters. **Normally such distance factors regarding location of important administrative machineries have some sort of reverse effect over the general development of the area since the officials are not usually aware of the problems of such habitates as their visit to such areas are infrequent. However, location of Gram Panchayats within and around the identified ten villages covered under the study is advantageous since this ensures the contribution of the inhabitants of the identified villages towards framing of policy matters for the development of the area by the Gram Panchayat.** Location of police station/sub station within or nearby village ensures to, some extent, the safety of the inhabitants of the villages. Though in non of the ten villages the police station/substation is located within the village but the distances are not much except for the village Polashganj where this facility is located at 12 kms away from the village.

#### **INFRASTRUCTURAL FACILITIES - ROADS**

4.60 For the development of particular area the availability of road network has always emerged as the key factor. The table below shows the status of the availability of the road infrastructure in and around the identified ten villages.

Table No. 4.17  
Road Infrastructure

Sl. No.	Name of the Village	Fair weather road		Kharanj a road within the village	Link road to all weather road		All weather road	
		Within the village 0 KM	Away from the village KM		Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM
1	2	3	4	5	6	7	8	9
<b>ADOPTED VILLAGES</b>								
1	Khajuri	0		0	0		0	
2	Polashganj	0		0	0			1
3	Mugalia Hat	0		0	0		0	
<b>CLUSTER VILLAGES</b>								
4	Sonkatch	0		0	0		0	
5	Kolukhedi	0		0	0			2
6	Kurana	0		0	0		0	
7	Ratatal	0		0	0		0	
8	Ratibad	0		0	0		0	
9	Khamkheda	0		0	0		0	
<b>CLUSTER VILLAGE</b>								
10	Manikkhedi Kot	0		0	0			6
	<b>Total</b>	<b>10</b>		<b>10</b>	<b>10</b>		<b>7</b>	<b>3</b>

4.61 Information contained in the above table reveals **the satisfactory level of availability of roads in ten identified villages**. All the villages have fair weather road within the villages and also the link roads to all weather roads. Even within the every village there is Kharanja road made up of rudimentary square shaped stone. Even seven villages have all weather roads passing through the village which, undoubtedly, a remarkable situation.

Infrastructural Facilities - Railway Station, Bus Stand/Bus Stop/  
Post Office/S.T.D. Booth

4.62 The table shows the details;

Table No. 4.18  
Facilities Regarding Railway Station/Bus Stand/Bus Stop/Post Office/STD Booth

Sl. No.	Name of the Village	Railway Station		Bus stand/ Bus stop		Post Office		STD booth	
		Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Khajuri		16	0	4		5		13
2	Polashganj		22		1		2		2
3	Mugalia Hat		23				1		1
<b>CLUSTER VILLAGES</b>									
4	Sonkatch		33	0		0		0	
5	Kolukhedi		30		2		2		2
6	Kurana		17		1	0	9	0	
7	Ratatal		19	0			2		15
8	Ratibad		20		1				2
9	Khamkheda		17		2	0			4
<b>CONTROL VILLAGE</b>									
10	Manikkhedi Kot		16		6		4		6
	<b>Total</b>		<b>10</b>	<b>3</b>	<b>7</b>	<b>3</b>	<b>7</b>	<b>2</b>	<b>8</b>

4.63 For all the ten villages the facility of railway station is located far away from the village. Nearest distance of railway station is 16 kms for villages Khajuri, and Manikheda Kot. In three villages viz. Khajuri, Sonkatch and Ratatal Bus stand/Bus Stop facility is available within the village while for 7 villages the distance of this facility ranges between on km for villages Mugalia Hat, Kurana and Ratibad to 6 kms for the village Manikhedi Kot. Similarly within three villages post office is located while for rest of seven villages this facility is located within easy reach of the villagers except for village Ratatal where this facility is located 9 kms away from the village. Even the STD facilities are available within two villages while five villages viz Polashganj, Mugalia Hat, Kolukhedi, Ratibad and Khamkheda have this facility within the easy reach of one to four kms. For villages Khajuri, Kurana and Manikheda Kot this facility is located at a distance of 13 kms, 15 kms and 6 kms respectively.

**4.64 The overall situation of transport and communication is satisfactory in identified ten villages responsible for fairly advanced state of agriculture of the area under survey through accessibility of market located at nearby capital city of Bhopal.**

**Infrastructural Facilities - Agriculture Marketing, Fair Price Shop, Cold Storage**

4.65 The fair return of agriculture produce to the farmers is as important as enhancing the agriculture productivity. Mandi or Sub Mandi being regulated markets are meaningful destinations for fair transaction of agriculture produce. With a view to protect cultivators from the sharp practices of brokers the Government of Madhya Pradesh has established an independent Directorate of Mandi. Presently, Madhya Pradesh has about 229 Mandies and 255 Sub Mandies. The cold storage is yet another important infrastructure that helps in avoiding distress selling. The table below shows the details.

Table No. 4.19  
Agriculture Marketing, Fair Price Shop and Cold Storage

Sl. No.	Name of the Village	Regular market		Weekly market		Mandi	
		Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM
1	2	3	4	5	6	7	8
<b>ADOPTED VILLAGES</b>							
1	Khajuri		3	0			16
2	Polashganj		4		4		20
3	Mugalia Hat		3		3		23
<b>CLUSTER VILLAGES</b>							
4	Sonkatch		5		5		9
5	Kolukhedi		2		2		14
6	Kurana		3		3		27
7	Ratatal		15		15		15
8	Ratibad		2		5		25
9	Khamkheda		4		4		17
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot		6		6		6
	<b>Total</b>		<b>10</b>	<b>1</b>	<b>9</b>		<b>10</b>

Table No. 4.19 [Contd..]  
Agriculture Marketing, Fair Price Shop and Cold Storage

Sl. No.	Name of the Village	Sub Mandi		Fair Price Shop		Cold Storage	
		Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM
1	2	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>							
1	Khajuri		16	0			10
2	Polashganj		2		2		22
3	Mugalia Hat		23		1		23
<b>CLUSTER VILLAGES</b>							
4	Sonkatch		9	0			9
5	Kolukhedi		14	0			14
6	Kurana		27	0			15
7	Ratatal		19		3		19
8	Ratibad		25		2		20
9	Khamkheda		17	0			17
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot		6		6		16
	<b>Total</b>		<b>10</b>	<b>5</b>	<b>5</b>		<b>10</b>

4.66 The above table shows that in non of the ten identified villages regular market, mandi, sub mandi and cold storage exist. **Distances of regular markets and weekly markets are within manageable limits that denotes the existence of bigger village at nearby distance where the villagers of ten identified villages go for transaction.** Mandi, sub mandi and cold storage facilities are located far away from the village boundaries of identified ten villages. The situation is some what discouraging. **Agriculture being the main occupation of these village the government may organize a regular market by providing some minimum infrastructure at village Mugalia hat having population of 1867 persons which may serve as nucleus for marketing destinations of nearby adopted and cluster group of villages.**

4.67 In five number of villages mostly consisting of adopted and cluster villages the facility of fair price shops exists within village limits whereas in other five number of villages this facility is located within manageable limits that indicates the government's initiative to protect the interests of the villagers by providing them consumables at reasonable rates.

#### **AGRO BASED INDUSTRIAL UNITS**

4.68 Agro-based industries, if exist in rural areas, add to the affluence of the area by creating employment avenues, that, besides providing regular employment, absorb the agriculture work force in lean season. The table below shows the existence of agro-based industries in sample villages.



Table No. 4.20  
Status of Agro Based Industrial Units

Sl. No.	Name of the Village	Flour Mill		Oil Mill		Dal Mill	
		Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM
1	2	3	4	5	6	7	8
<b>ADOPTED VILLAGES</b>							
1	Khajuri	0			16		16
2	Polashganj		2		20		20
3	Mugalia Hat	0			23		23
<b>CLUSTER VILLAGES</b>							
4	Sonkatch	0			9		9
5	Kolukhedi	0			14		14
6	Kurana	0			5		15
7	Ratatal	0			18		18
8	Ratibad		2		2		20
9	Khamkheda	0			4		17
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot	0			16		16
	<b>Total</b>	<b>8</b>	<b>2</b>		<b>10</b>		<b>10</b>

Table No. 4.20 [Contd.]  
Status of Agro Based Industrial Units

Sl. No.	Name of the Village	Saw Mill		Repair of Agri. Implements	
		Within the village 0 KM	Away from the village KM	Within the village 0 KM	Away from the village KM
1	2	9	10	11	12
<b>ADOPTED VILLAGES</b>					
1	Khajuri		16		13
2	Polashganj		20		6
3	Mugalia Hat		12		3
<b>CLUSTER VILLAGES</b>					
4	Sonkatch		9		9
5	Kolukhedi		14		14
6	Kurana		10		5
7	Ratatal		15		7
8	Ratibad		15		2
9	Khamkheda		15		4
<b>CONTROL VILLAGE</b>					
10	Minikhedi Kot		6		10
	<b>Total</b>		<b>10</b>		<b>10</b>

4.69 The above table shows that out of 10 villages, in 8 number of villages flour mills are located within the village boundary while in two villages viz. Polashganj and Ratibad this facility is located 2 kms away from the village which can be considered to be at the proximity of the village boundary. In none of the villages the Oil Mills exist and the locational distance is substantial except for the villages Kurana, Ratibad and Khamkheda where this facility is located at a distance of 5, 2 and 4 kms respectively. "Similar is the case with Dal Mill where the locational distance range between 9 kms [village Sonkatch] to 23 kms [village Mugalia Hat]. The non-availability of facilities like saw mills in ten identified villages seems justified as the area is not rich in forest resources but total absence of any repair unit of agricultural implements seems out of place since the area is fairly advanced agriculturally. **The educated youth of the villages may be encouraged through subsidy schemes of the government to establish such units which may serve the purpose of income augmentation by creating employment opportunities.**

## SOCIAL INPUTS

### EDUCATION

#### ELEMENTARY EDUCATION – PRIMARY LEVEL

4.70 The Directive Principles of Constitution of India envisages provision of free and compulsory education to all children upto the age of 14 years of age before the commencement of 21<sup>st</sup> century. Now that the 21<sup>st</sup> century has set-in, fresh dead lines have been drawn-up. The goals of the Universalisation of Elementary Education [U.E.E.] are;

- Universal access to primary schooling facility within a radius of one km and a middle school within a radius of at least 3 kms.
- Universal enrolment of children of age group of 6 to 14 years
- Universal retention of all enroled children till they complete eight years of elementary schooling.

Keeping in view the above criteria, the information has been collected from sample villages. The table below shows the details of primary level of education;

Table No. 4.21  
Status of Primary Level of Education

Sl. No.	Name of the Village	Primary School					Non formal education	
		Within the village 0 KM	Within 1 KM	Within 2 KM	Within 3 KM	>3 KM	Within the village 0 KM	Away from the village KM
1	2	3	4	5	6	7	8	9
<b>ADOPTED VILLAGES</b>								
1	Khajuri	0						7
2	Polashganj	0						4
3	Mugalia Hat	0					0	
<b>CLUSTER VILLAGES</b>								
4	Sonkatch	0					0	
5	Kolukhedi	0					0	
6	Kurana	0					0	
7	Ratatal	0						5
8	Ratibad	0						6
9	Khamkheda	0						3
<b>CLUSTER VILLAGE</b>								
10	Manikkhedi Kot	0						6
	<b>Total</b>	<b>10</b>					<b>4</b>	<b>6</b>

4.71 One positive fact revealed by the above table is the existence of primary schools within the village periphery of all the identified ten number of villages that contributed for higher level of literacy rate in all the identified ten number of villages.. Non-formal education centres, which are meant for working children who can not attend the regular primary institutions, are in vogue in four villages while in rest of the six villages these centres are located within manageable distance of the village. However, due to availability of primary level institutions the location of such centres within the village is not also much required.

## ELEMENTARY EDUCATION–MIDDLE LEVEL AND ADULT EDUCATION

4.72 The table below shows the status of middle level and adult education.

Table No. 4.22  
Status of Middle Level and Adult Education

Sl. No.	Name of the Village	Middle School					Adult Education	
		Within the village 0 KM	Within 5 KM	More than 5 KM	Within 1 KM	Within 2 KM	Within 3 KM	> 3KM
1	2	3	4	5	6	7	8	9
<b>ADOPTED VILLAGES</b>								
1	Khajuri	0						5
2	Polashganj		4					3
3	Mugalia Hat	0						6
<b>CLUSTER VILLAGES</b>								
4	Sonkatch	0						4
5	Kolukhedi		2					3
6	Kurana	0						7
7	Ratatal	0						8
8	Ratibad		2					6
9	Khamkheda	0						17
<b>CLUSTER VILLAGE</b>								
10	Manikkhedi Kot			6				6
	<b>Total</b>	<b>6</b>	<b>3</b>	<b>1</b>				<b>10</b>

4.73 The above table shows that in six villages the middle school is located within the village while in four villages the location is within the easy reach of the villagers. Since the criterion of the accessibility of the middle school is 3 kms, the eight number of villages are within the laid down criterion. In non of the villages the adult education centres exist **Since the literacy rate in these ten villages is high the existence of such centers is not essential as well.**

4.74 The policy relating to secondary education implies extension of the school system in unserved areas, consolidating the existing facilities and providing special arrangements for the talented students.

4.75. In view of above policy decisions, the status of secondary level education in sample villages is not satisfactory. The table below shows the details.

Table No. 4.23  
Secondary Level Education

Sl. No.	Name of the Village	High School			Higher School (+2)		
		In the village 0 KM	Within 5 KM	More than 5 Km	In the village 0 KM	Within 5 KM	More than 5 KM
1	2	3	4	5	6	7	8
<b>ADOPTED VILLAGES</b>							
1	Khajuri			6			6
2	Polashganj			10			10
3	Mugalia Hat		3				10
<b>CLUSTER VILLAGES</b>							
4	Sonkatch		5			5	
5	Kolukhedi		2			2	
6	Kurana		5			5	
7	Ratatal		0				7
8	Ratibad		2				6
9	Khamkheda		4			4	
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot			6			6
	<b>Total</b>		<b>7</b>	<b>3</b>		<b>4</b>	<b>6</b>

4.76 The above table shows that in non of the villages high or higher schools [+2] exist. For high school the location is usually within 5 km distance from the village while for higher schools this locational distance is usually more than 6 kms.

#### COLLEGIATE AND TECHNICAL EDUCATION

4.77 The table below shows the details

Table No. 4.24  
Collegiate, Technical Education

Sl. No.	Name of the Village	College			Industrial Training Institute		
		Within the village 0 KM	Within 5 KM	More than 5 Km	In the village 0 KM	Within 5 KM	More than 5 KM
1	2	3	4	5	6	7	8
<b>ADOPTED VILLAGES</b>							
1	Khajuri			13			16
2	Polashganj			20			20
3	Mugalia Hat			10			23
<b>CLUSTER VILLAGES</b>							
4	Sonkatch			9			33
5	Kolukhedi			30			30
6	Kurana			8			8
7	Ratatal			14			15
8	Ratibad			10			15
9	Khamkheda			17			17
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot			16			12
	<b>Total</b>			<b>10</b>			<b>10</b>

4.78 In non of the villages college or Industrial Training Institutes exist which seem obvious as such institutions usually exist in tahsil or district headquarters.

## HEALTH

- 4.79 Improvement in health status of the population has been one of the thrust areas in the social development programmes of the State of Madhya Pradesh. The ultimate objective of the health and family welfare activities in the State is to achieve the goal of “Health for All” as outlined in the National Health Policy which emphasized on implementation of primary health care approach.
- 4.80 In pursuit of this goal, a multi-tier health and family welfare service delivery system has been established in the State consisting of Sub-Health Centres, Primary Health Centres and Community Health Centres. Besides, civil hospitals, district hospitals and other special health care institutions have been provided for as a support to three-tier system. A mention of the norms accepted for three-tier system is given below;
- Sub Health Centre for every 5000 population in non-tribal areas and 3000 population in tribal areas.
  - Primary Health Centre for every 30000 population in non-tribal areas and 20000 population in tribal areas.
  - Community Health Centre for every 120000 population in no-tribal areas and 80000 population in tribal areas.
- 4.81 In view of the population criteria for rural health facilities as shown in above paragraph the consideration for location of only Sub Health Centres, Rural Family Welfare Centres etc. may be considered. The table below shows the details;

Table No. 4.25  
Rural Health Infrastructural

Sl. No.	Name of the Village	Sub Health Centre			Rural Family Welfare Centre		
		Within the village 0 KM	Within 5 KM	More than 5 Km	In the village 0 KM	Within 5 KM	More than 5 KM
1	2	3	4	5	6	7	8
<b>ADOPTED VILLAGES</b>							
1	Khajuri	0			0		
2	Polashganj			10		4	
3	Mugalia Hat	0			0		
<b>CLUSTER VILLAGES</b>							
4	Sonkatch			7			7
5	Kolukhedi		2			4	
6	Kurana	0			0		
7	Ratatal		3			3	
8	Ratibad		2			2	
9	Khamkheda		4		0		
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot			6			6
	<b>Total</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>2</b>

Table No. 4.25 [Contd...]  
Rural Health Infrastructural

Sl. No.	Name of the Village	Government Hospital			Government Dispensary		
		Within the village 0 KM	Within 5 KM	More than 5 Km	In the village 0 KM	Within 5 KM	More than 5 KM
1	2	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>							
1	Khajuri			10			10
2	Polashganj			10			10
3	Mugalia Hat	0			0		
<b>CLUSTER VILLAGES</b>							
4	Sonkatch			9			9
5	Kolukhedi			25			25
6	Kurana		5		0		
7	Ratatal		3			3	
8	Ratibad		5			5	
9	Khamkheda			17		4	
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot			12			12
	<b>Total</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>2</b>	<b>3</b>	<b>5</b>

Table No. 4.25 [Contd...]  
Rural Health Infrastructural

Sl. No.	Name of the Village	Private Clinic			Nursing Home		
		Within the village 0 KM	Within 5 KM	More than 5 Km	In the village 0 KM	Within 5 KM	More than 5 KM
1	2	15	16	17	18	19	20
<b>ADOPTED VILLAGES</b>							
1	Khajuri	0					16
2	Polashganj		4				20
3	Mugalia Hat	0					18
<b>CLUSTER VILLAGES</b>							
4	Sonkatch						9
5	Kolukhedi		2				25
6	Kurana	0					10
7	Ratatal	0					15
8	Ratibad		2				17
9	Khamkheda		4				10
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot	0		6			12
	<b>Total</b>	<b>5</b>	<b>4</b>	<b>1</b>			<b>10</b>

4.82 Against the total number of 10 villages, 3 villages have Sub Health Centres within the village while 3 villages have this facility within 5 km limit and 3 villages have this facility at a distance of more than five kms. **From the view point of accessibility the situation is satisfactory.**

- 4.83 Regarding Rural Family Welfare Centres it may be seen that in four number of villages the facility is located within the geographical limit of the village while in another four number of villages the facility is located within 5 kms distance of the village while for two number of villages the facility is located more than 5 kms away from the village. The overall situation is satisfactory as the facility can be accessed by the eligible couples conveniently.
- 4.84 Regarding Government Hospitals, in one village [Mugalia Hat] this facility is located within the village while in three villages the facility is located within 5 kms distance from the village and in 6 number of villages the facility is located more than 5 kms away from the village. More or less, similar is the case with the location of Government Dispensaries. **As said earlier, the importance of Sub Health Centres and Rural Family Welfare Centres as Rural Health infrastructure are significant, therefore, the existence of hospitals and dispensaries are not very meaningful as these places are not much frequented by the villagers due to perpetual absence of doctors.**
- 4.85 In most of the villages Private Clinics are within easy reach of the villagers which indicate the confidence of the villagers on private licentiate practitioners, not necessarily a qualified doctor.

## FAMILY WELFARE

- 4.86 Limiting the size of the family is, perhaps, the most important factor of family welfare. The nation wide campaign of family welfare has certainly made a dent both in urban and rural areas. The table below shows the status of acceptors of family welfare measures in sample villages covered under the study;

Table No. 4.26  
Status of Acceptors of Family Welfare Measures

Sl. No.	Name of the Village	Total workers	Acceptors of Nirodh (No. of Ben.)	Tubectomy (No. of Ben.)	Vasectomy (No. of Ben.)	Loop Insertion (No. of Ben.)	Oral Pills (No. of Ben.)	Traditional Methods (No. of Ben.)
1	2	3	4	5	6	7	8	9
1	Khajuri	274	15 [5.47]	25 [9.12]	0	7 [2.55]	0	0
2	Polashganj	190	9 [4.74]	14 [7.37]	0	2 [1.05]	6 [3.16]	0
3	Mugalia Hat	896	25 [2.79]	245 [27.34]	10 [1.12]	7 [0.78]	20 [2.23]	0
<b>Adopted Villages</b>		<b>1360</b>	49 [3.60]	284 [20.88]	10 [0.74]	16 [1.18]	26 [1.91]	0
4	Sonkatch	307	40 [19.32]	18 [5.86]	1 [0.33]	7 [2.28]	3 [0.98]	0
5	Kolukhedi	120	20 [16.67]	26 [21.67]	3 [2.50]	3 [2.50]	9 [7.50]	0
6	Kurana	591	60 [10.15]	48 [8.12]	3 [0.51]	10 [1.69]	28 [4.74]	0
7	Ratatal	291	10 [3.43]	20 [6.87]	3 [1.03]	5 [1.72]	7 [2.41]	0
8	Ratibad	189	15 [7.94]	10 [5.29]	0	3 [1.59]	7 [3.70]	0
9	Khamkheda	481	93 [19.33]	70 [14.55]	2 [Neg.]	12 [2.49]	35 [7.28]	0
<b>Cluster villages</b>		<b>1979</b>	238 [12.03]	192 [9.70]	12 [0.61]	40 [2.02]	89 [4.50]	0
10	Manikkhedi Kot	169	13 [7.69]	15 [8.88]	0	5 [2.96]	7 [4.14]	0
<b>Control Village</b>		169	13 7.69	15 [8.88]	0	5 [2.96]	7 [4.14]	0
<b>Total</b>		<b>3508</b>	<b>300 [8.55]</b>	491 [14.00]	<b>22 [0.63]</b>	<b>61 [1.74]</b>	<b>122 [3.48]</b>	<b>0</b>

Note : Figures in brackets show percentage to the figures of Col -3

4.87 In the above table the percentage figures have been arrived at on the basis of the figures of the work force which is, strictly, not very correct. The comparison should have been on the basis of the figures of eligible couples. Since village wise such figures are not available, therefore as a second option the work force figures that usually include persons within the age group of 15 to 59 years have been taken who may be considered as population with reproductive capacity, particularly of males.

**4.88 Against the total figure of 3508 persons in the work force the total number of persons adopting various methods of family welfare is 996 constituting 28.39 percent to total work force of ten identified villages. The performance, to some extent, is satisfactory as the figure would have gone to higher level had the comparisons made with the figures of eligible couples.** As has been expected the emphasis is more on the methods of tubectomy and acceptance of Nirodh than on other measures.

4.89 In adopted and cluster group of villages the response to family welfare measures is better than the control village.

## DRINKING WATER

4.90 The strategies envisaged for the Tenth Plan mainly centred round the qualitative and quantitative improvement in rural water supply system by raising the level of services from 40 lped to 55 lped, reduce the maximum distance of water sources from the present 1.6 kms to 0.5 km, providing alternate safe water source where existing sources have been contaminated and providing potable drinking water to new settlements etc.

4.91 Against the back drop of such strategies, the table below shows the existing level of drinking water facilities in the sample villages.

Table No. 4.27  
Status of Drinking Water Facilities

Sl. No.	Name of the Village	Source of drinking water				
		In the village 0 KM	Distance from the village			
			=1 KM	=2KMS	=3KMS	=4KMS
1	2	3	4	5	6	7
<b>ADOPTED VILLAGES</b>						
1	Khajuri	0	-	-	-	-
2	Polashganj	0	-	-	-	-
3	Mugalia Hat	0	-	-	-	-
<b>CLUSTER VILLAGES</b>						
4	Sonkatch	0	-	-	-	-
5	Kolukhedi	0	-	-	-	-
6	Kurana	0	-	-	-	-
7	Ratatal	0	-	-	-	-
8	Ratibad	0	-	-	-	-
9	Khamkheda	0	-	-	-	-
<b>CONTROL VILLAGE</b>						
10	Manikkhedi Kot	0	-	-	-	-
	<b>Total</b>	10	-	-	-	-

4.92 The above table shows that in all the ten number of sample villages one or other drinking water source, mostly hand pumps, is available within the village which is the result of massive work of installation of hand pumps in rural areas undertaken by the State Government.



**4.93 In what follows an attempt has been made to summarise the details of village particulars;**

- **The basic purpose of the collection of information about village facilities for identified 10 number of villages is to ascertain the absorption capacity of any prevailing or new technology for any field what-so-ever.**
- **In all the identified ten villages the percentage of S.C. population is more than that of S.T. population. The literacy rate that ranged between 52.60 percent in village Ratibad to 66.50 percent in village Kalukhedi is close to the district percentage literacy level of 64.27 and higher than the State average of 44.67 percent.**
- **In villages Ratibad and Manikhedi Kot where female work participation rate is 54.40 percent and 58.80 percent respectively is somewhat remarkable that shows the awareness among female population about value of work for augmenting family income.**
- **The proportion of non-workers which ranged between 43.10 percent in village Manikhedi Kot to 75.90 percent in village Kolukhedi is somewhat discouraging that shows the higher number of dependent population.**
- **In all the ten number of villages covered under the study agriculture remains to be the main occupation with preponderance of male cultivators over females. In villages Kolukhedi and Manikhedi Kot the proportion of female cultivators is much higher which indicates the positive role of females.**
- **The situation of proportion of workers in household industries to total workers is far from being encouraging as it ranged between 0.90 percent in village Kolukhedi to 9.40 percent in Sonkatch. One of the important factors of rural poverty is the near absence of secondary sector activities that play an important role in enhancing rural income.**
- **The percentage of gross irrigated area to gross cropped area is 37.18 for ten identified villages which is more than the district average of 33.19 percent and State average of 28.54 percent.**
- **All the ten number of villages covered under the study are electrified with irregular power supply situation.**
- **The total number of pump sets energized in ten identified villages is 1464 which is 8.65 percent of total number of pump sets energized in Bhopal district that stands at 16,923 for the year 1999-2000. This is, no doubt, a bright picture that denotes sincere efforts of the rural population of the identified area for pursuing agriculture occupation.**
- **Village Mugalia Hat has 3 members of cooperative Societies which is somewhat extraordinary based on the fact that the total population of this village is 1867 persons as per census, 2001 with work participation rate of 48.00 percent along with proportion of cultivators to total workers as 52.50 percent.**
- **The availability of the facility of road infrastructure in identified ten villages is satisfactory as they have fair weather roads within the villages and also the link roads to all weather roads.**
- **In none of the villages the regular markets, weekly markets are held. Agriculture being the main occupation of these villages the government may organize a regular market by providing some minimum infrastructure at village Mugalia Hat having population of 1867 persons which may serve as nucleus for marketing destinations of nearby adopted and cluster group of villages.**
- **In all the identified ten villages the primary schools exist in village limits that contributed for higher level of literacy in the identified ten number of villages.**
- **Against the total number of ten villages, 3 number of villages have Sub-Health Centres within the village while 4 villages have this facility within 5 km limit**

and 3 villages have this facility at a distance of more than 5 kms. From the view point of accessibility, the situation is satisfactory.

- The locational status of Rural Family Welfare Centres is also satisfactory as the facility can be accessed by eligible couples conveniently.
- Against the total figure of 3508 persons in the work force the total number of persons adopting various methods of family welfare is 996 constituting 28.39 percent to total work force of ten identified villages. The performance, to some extent, is satisfactory.
- In all the ten number of sample villages one or the other drinking water source, mostly hand pumps, is available within the village.

## RESULTS OF SURVEY - Households particulars Macro Dimensions

4.94 In any impact study, household particulars present the socio-economic and cultural trends of the area. The present part of the chapter deals with the information relating to the households in following dimensions;

- (i) Macro dimensions – Wherein information from all the households residing in 10 number of sample villages has been collected.
- (ii) Micro dimensions – Wherein 25 percent of the households have been identified for the detailed enquiry.

4.95 In what follows an attempt has been made to detail out both the macro and micro dimensions based on the information collected through House Listing Schedule and household Schedule respectively.

## MACRO DIMENSIONS - GENERAL PARTICULARS

4.96 The table below shows the details

Table No. 4.28  
Household Details

Sl. No.	Name of the Village	No. of households as on the date of survey	Population Census – 2001	Average size of the family (based on the figure of col. 4)
1	2	3	4	5
<b>ADOPTED VILLAGES</b>				
1	Khajuri	121	941	8
2	Polashganj	51	349	7
3	Mugalia Hat	310	1867	6
<b>Total I</b>		482	3157	7
<b>CLUSTER VILLAGES</b>				
4	Sonkatch	109	751	7
5	Kolukhedi	81	497	6
6	Kurana	131	1677	13
7	Ratatal	119	656	6
8	Ratibad	49	335	6
9	Khamkheda	215	1408	7
<b>Total II</b>		704	5324	8
<b>CONTROL VILLAGE</b>				
10	Manikkhedi Kot	59	297	5
<b>Total III</b>		59	297	5
<b>Grand Total</b>		1245	8778	7

4.97 The total number of households as per survey is 1245 for all the ten identified villages. **The average size of the family comes to 7 persons which is more than the standard size of the family of 5 persons. In village Kurana the average size of the family is exceptionally high [13 persons] that needs the special attention of district administration.**

### SOCIAL STATUS OF HOUSEHOLDS

4.98 The table below shows the social status of the households;

Table No. 4.29  
Social Status of the Households

Sl. No.	Name of the Village	No. of Household	Caste (Social Classification)				Interaction with KVK	
			S.T.	S.C.	O.B.C.	General	Yes	No
1	2	3	4	5	6	7	8	9
<b>ADOPTED VILLAGES</b>								
1	Khajuri	121	19	3	24	75	74	47
2	Polashganj	51	0	9	40	2	37	14
3	Mugalia Hat	310	0	90	209	11	152	158
<b>Total I</b>		482	19	102	273	88	263	219
<b>CLUSTER VILLAGES</b>								
4	Sonkatch	109	17	48	36	8	63	46
5	Kolukhedi	81	2	24	54	1	42	39
6	Kurana	131	0	37	90	4	70	61
7	Ratatal	119	0	18	99	2	56	63
8	Ratibad	49	3	1	41	4	30	19
9	Khamkheda	215	23	67	103	22	83	132
<b>Total II</b>		704	45	195	423	41	344	360
<b>CLUSTER VILLAGE</b>								
10	Manikkhedi Kot	59	0	4	49	6	1	58
<b>Total III</b>		59	0	4	49	6	1	58
<b>Total I+II+III</b>		<b>1245 [100]</b>	<b>64 [5.14]</b>	<b>301 [24.18]</b>	<b>745 [59.84]</b>	<b>135 [10.84]</b>	<b>608 [48.84]</b>	<b>637 [51.16]</b>

**Note : Figures in brackets show the percentage to total number of households.**

4.99 The above table shows **the preponderance of households from S.C. communities and O.B.Cs. that constitutes 84.02 percent to total number of households. Only 5.14 percent households hail from S.T. communities that too from adopted and cluster villages only.** One interesting feature of the table is represented by the fact that families belonging to general communities is maximum in three number of adopted villages i.e. 65.19 percent to total number of general category households in ten identified villages whereas in six number of cluster villages this percentage is only 30.37. These three villages are advanced agriculturally as the percentage of total irrigated area to gross cropped area is quite high along with fair magnitude of cultivable waste land [table no. 4.12].

## HOUSEHOLDS CLASSIFIED ON THE BASIS OF RELIGION

4.100 The table below shows the details;

Table No. 4.30  
Distribution of Households according to Religion

Sl. No.	Name of the Village	No. of Household	Hindu	Muslim	Sikh	Christian	Nu-Buddh
1	2	3	4	5	6	7	8
<b>ADOPTED VILLAGES</b>							
1	Khajuri	121	96	25	0	0	0
2	Polashganj	51	51	0	0	0	0
3	Mugalia Hat	310	310	0	0	0	0
<b>Total I</b>		482	457	25	0	0	0
<b>CLUSTER VILLAGES</b>							
4	Sonkatch	109	108	1	0	0	0
5	Kolukhedi	81	81	0	0	0	0
6	Kurana	131	131	0	0	0	0
7	Ratatal	119	119	0	0	0	0
8	Ratibad	49	49	0	0	0	0
9	Khamkheda	215	215	0	0	0	0
<b>Total II</b>		704	703	1	0	0	0
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot	59	59	0	0	0	0
<b>Total III</b>		59	59	0	0	0	0
<b>Total</b>		<b>1245</b>	<b>1219</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>

4.101 Against the total number 1245 households, 1219 households belong to Hindu community **constituting 97.91 percent to total households. Only 26 families are following the muslim religion.** There is complete absence of families belonging to Sikh, Christian or Nu-Budh religion.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS–MAIN OCCUPATION

### PRIMARY SECTOR – AGRICULTURE

4.102 The table below shows the details

Table No. 4.31  
Household According to their Main Occupation – Agriculture

Sl. No.	Name of the Village	No. of Household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
<b>ADOPTED VILLAGES</b>						
1	Khajuri	121	7	13	36	55
2	Polashganj	51	7	17	10	12
3	Mugalia Hat	310	10	43	105	138
<b>Total I</b>		482	24 [4.98]	73 [15.15]	151 [31.33]	205 [42.53]
<b>CLUSTER VILLAGES</b>						
4	Sonkatch	109	14	22	15	29
5	Kolukhedi	81	14	11	15	2
6	Kurana	131	14	32	22	2
7	Ratatal	119	14	20	22	49
8	Ratibad	49	14	8	9	10
9	Khamkheda	215	29	37	42	98
<b>Total II</b>		704	99 [14.06]	130 [18.47]	125 [17.76]	231 [32.81]
<b>CONTROL VILLAGE</b>						
10	Minikhedi Kot	59	0	7	15	20
<b>Total III</b>		59	0	7 [11.86]	15 [25.42]	20 [33.90]
<b>Grand Total</b>		<b>1245</b>	<b>123 [9.86]</b>	<b>210 [16.87]</b>	<b>291 [23.37]</b>	<b>456 [36.63]</b>

Note : Figures in brackets show percentage to total number of households

4.103 Out of the total number of 1245 households 1080 households are engaged directly in agriculture occupation that **account for 86.75 percent to total number of households. Small and marginal farmers together constitute 26.73 percent which is an encouraging indicator** while other farmers mostly consisting of medium and large cultivators consist of 23.37 percent to total number of households. The percentage of agriculture labour to total households is 36.63 percent. **Agriculture, therefore, is carried out on viable scale in all the identified ten villages.**

#### **PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING**

4.104 Activities allied to agriculture are equally important as additional source of income and employment in rural areas. The table below shows the details;

Table No. 4.32

Households according to their Main Occupations – Forest, Livestock, Fisheries, Hunting

Sl. No.	Name of the Village	No. of Household	Minor Forest Produce Collection	Live Stock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
<b>ADOPTED VILLAGES</b>						
1	Khajuri	121	0	0	0	0
2	Polashganj	51	0	0	0	0
3	Mugalia Hat	310	0	7	0	0
<b>Total I</b>		482	0	7 [1.45]	0	0
<b>CLUSTER VILLAGES</b>						
4	Sonkatch	109	0	0	0	0
5	Kolukhedi	81	0	3	0	0
6	Kurana	131	0	0	0	0
7	Ratatal	119	0	1	0	0
8	Ratibad	49	0	0	0	0
9	Khamkheda	215	0	7	0	0
<b>Total II</b>		704	0	11 [1.56]	0	0
<b>CONTROL VILLAGE</b>						
10	Minikhedi Kot	59	0	0	0	0
<b>Total III</b>		59	0	0	0	0
<b>Grand Total</b>		<b>1245</b>	<b>0</b>	<b>18 [1.45]</b>	<b>0</b>	<b>0</b>

Note : Figures in brackets show percentage to total number of households.

4.105 In non of the ten identified villages the occupations like minor forest produce collection, fishing activities and hunting activities are performed as main source of livelihood. Only 18 families mostly from adopted and cluster villages that constitute 1.45 percent to total number of households are engaged in livestock activities as main source of livelihood, **which emphasizes a basic fact that in the context of rural scenario, in general, agriculture remains to be the main occupation which requires intensive attention of the planners. The reasons for failure of government initiatives to develop animal husbandry in rural areas is the lack of intent and resources of the rural households along with absence of marketing avenues. Agriculture, once made viable and sustainable will automatically lead to the development of its allied activities for which no government initiative vis-à-vis investment will perhaps be required in the long run.**

## SECONDARY AND TERTIARY SECTORS

4.106 Secondary and tertiary sector occupations, being a meaningful destinations for diversification of agriculture, also offer work opportunities to absorb the work force engaged in marginal farming or pursuing the occupation of agriculture labour. The table below shows the details

Table No. 4.33

## Households According to Main Occupations – Secondary and Tertiary Sectors

Sl. No.	Name of the Village	No. of Household	Secondary Sector		Tertiary Sector		
			Servicing and Repairs	Construction Work	Government Service	Service in Private Sector	Other
1	2	3	4	5	6	7	8
<b>ADOPTED VILLAGES</b>							
1	Khajuri	121	0	0	6	0	4
2	Polashganj	51	0	2	2	0	3
3	Mugalia Hat	310	0	1	10	6	5
<b>Total I</b>		482	0	3 [0.62]	18 [3.75]	6 [1.24]	12 [2.49]
<b>CLUSTER VILLAGES</b>							
4	Sonkatch	109	0	1	4	2	2
5	Kolukhedi	81	0	0	1	2	3
6	Kurana	131	0	1	14	1	5
7	Ratatal	119	0	0	6	0	4
8	Ratibad	49	0	1	3	0	3
9	Khamkheda	215	0	0	18	0	3
<b>Total II</b>		704	0	3 [0.43]	46 [6.53]	5 [0.71]	20 [2.84]
<b>CONTROL VILLAGE</b>							
10	Minikhedi Kot	59	0	0	0	0	3
<b>Total III</b>		59	0	0	0	0	3 [5.08]
<b>Grand Total</b>		<b>1245</b>	<b>0</b>	<b>6 [0.48]</b>	<b>64 [5.14]</b>	<b>11 [0.88]</b>	<b>35 [2.81]</b>

Note : Figures in brackets show percentage to total number of households.

4.107 The picture that emerged from the above table is dismal. **In secondary sector only 0.48 percent families are engaged in construction work as compared to total number of households where as tertiary sector i.e. government service and service in private sector is only 6.02.** In 'Other' group those households have been incorporated who do not come under any of the specified category. In fact, this group can not be categorized under tertiary sector, but for the sake of tabular representation this item has been shown along with the tertiary sector. In this group 35 households are engaged constituting 2.81 percent of the total households. The families engaged in this group of activities are vulnerable who do not possess any sort of fixed asset to pursue a line of activity for livelihood. They are sort of floating households who grab at any thing for sustenance.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – SUBSIDIARY OCCUPATIONS

### PRIMARY SECTOR – AGRICULTURE

4.108 The table below shows the details;

Table No. 4.34  
Households According to their Subsidiary Occupation – Agriculture

Sl. No.	Name of the Village	No. of Household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
<b>ADOPTED VILLAGES</b>						
1	Khajuri	121	1	2	0	0
2	Polashganj	51	3	1	0	3
3	Mugalia Hat	310	15	11	1	22
<b>Total I</b>		482	19 [3.94]	14 [2.90]	1 [0.21]	25 [5.19]
<b>CLUSTER VILLAGES</b>						
4	Sonkatch	109	10	2	0	12
5	Kolukhedi	81	8	1	0	9
6	Kurana	131	12	4	0	15
7	Ratatal	119	11	5	0	13
8	Ratibad	49	5	2	0	7
9	Khamkheda	215	32	4	4	26
<b>Total II</b>		704	78 [11.08]	18 [2.56]	4 [0.57]	82 [11.65]
<b>CONTROL VILLAGE</b>						
10	Minikhedi Kot	59	5	5	0	3
<b>Total III</b>		59	5 [8.47]	5 [8.47]	0	3 [5.08]
<b>Grand Total</b>		<b>1245</b>	<b>102 [8.19]</b>	<b>37 [2.97]</b>	<b>5 [0.40]</b>	<b>110 [8.84]</b>

Note : Figures in brackets show percentage to total number of households.

4.109 Out of the total number of 1245 sample households the number of households pursuing agriculture as subsidiary occupation is 254 constituting 20.40 percent to total households. **Mostly the families engaged are from marginal farmers, small farmers and from the category of agriculture labour** who along with other activities perform agriculture activities for additional source of income. In general the percentage of such families are more or less evenly distributed among adopted, cluster and control group of villages.

#### **PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING**

4.110 The table below shows the details;



Table No. 4.35

Households According to their Subsidiary Occupation – Forest, Livestock, Fisheries, Hunting

Sl. No.	Name of the Village	No. of Household	Minor Forest Produce Collection	Live Stock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
<b>ADOPTED VILLAGES</b>						
1	Khajuri	121	0	1	0	0
2	Polashganj	51	0	0	0	0
3	Mugalia Hat	310	0	6	0	0
<b>Total I</b>		482	0	7 [1.45]	0	0
<b>CLUSTER VILLAGES</b>						
4	Sonkatch	109	0	0	1	2
5	Kolukhedi	81	0	3	0	0
6	Kurana	131	0	0	0	0
7	Ratatal	119	0	0	0	0
8	Ratibad	49	0	0	0	0
9	Khamkheda	215	0	0	0	0
<b>Total II</b>		704	0	3 [0.43]	1 [0.14]	2 [0.28]
<b>CONTROL VILLAGE</b>						
10	Minikhedi Kot	59	0	2	0	0
<b>Total III</b>		59	0	2 [3.39]	0	0
<b>Grand Total</b>		<b>1245</b>	<b>0</b>	<b>12 [0.96]</b>	<b>1 [0.08]</b>	<b>2 [0.16]</b>

Note : Figures in brackets show percentage to total households.

4.111 The aggregate percentage of livestock fisheries and hunting activities wherein families are engaged as subsidiary occupation [mostly in adopted and cluster villages] is 1.2 which can hardly be termed as any sort of performance. **Actually these activities as supportive source of income should be encouraged by government initiatives provided there is willingness from the target groups to adopt such occupations.**

## SECONDARY AND TERTIARY SECTORS

4.112 The table below shows the details;

Table No. 4.36

## Households According to their Subsidiary Occupations – Secondary and Tertiary Sectors

Sl. No.	Name of the Village	No. of Household	Secondary Sector		Tertiary Sector	
			Servicing and Repairs	Const- ruction work	Govt. Service	Service in Private Sector
1	2	3	4	5	6	7
<b>ADOPTED VILLAGES</b>						
1	Khajuri	121	0	0	1	0
2	Polashganj	51	0	0	6	2
3	Mugalia Hat	310	0	0	4	6
<b>Total I</b>		482	0	0	11 [2.28]	8 [1.66]
<b>CLUSTER VILLAGES</b>						
4	Sonkatch	109	0	0	4	6
5	Kolukhedi	81	0	0	0	0
6	Kurana	131	0	0	2	1
7	Ratatal	119	0	0	8	1
8	Ratibad	49	0	0	1	1
9	Khamkheda	215	0	0	0	0
<b>Total II</b>		704	0	0	15 [2.13]	9 [1.28]
<b>CONTROL VILLAGE</b>						
10	Minikhedi Kot	59	0	0	0	0
<b>Total III</b>		59	0	0	0	0
<b>Grand Total</b>		<b>1245</b>	<b>0</b>	<b>0</b>	<b>26 [2.09]</b>	<b>17 [1.37]</b>

Note : Figures in brackets show percentage to total households.

The performance of the households in subsidiary occupation in secondary and tertiary sectors is negligible. In government, mostly as grass root health and education workers, the percentage involvement of families is only 2.09 whereas this percentage for service in private sector is only 1.37.

**4.113 The overall conclusion that can be drawn from the information relating to occupational distribution of households is the preponderance of agriculture as main occupation for earning the livelihood.**

#### **AVERAGE MONTHLY INCOME**

4.114 In any data collection work, the task of getting correct information from informants about their monthly income and expenditure is difficult as they are usually very cautious to come out with the facts. However, an attempt has been made to collect such information with clear understanding that the information may not be altogether correct. However, a trend is visible, which may be useful. The table below shows the details;

Table No. 4.37  
Average Monthly Income

Sl. No.	Name of the Village	No. of Household	Below Rs. 500	Rs. 501-600	Rs. 601-700	Rs. 701-800	Rs. 801-900	Rs. 901-1000	Rs. 1001 and above
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Khajuri	121	0	0	0	0	0	0	121
2	Polashganj	51	1	4	0	1	0	3	42
3	Mugalia Hat	310	7	5	1	10	5	21	261
	<b>Total I</b>	482	8 [1.66]	9 [1.87]	1 [0.21]	11 [2.28]	5 [1.04]	24 [4.98]	424 [87.96]
<b>CLUSTER VILLAGES</b>									
4	Sonkatch	109	4	1	0	5	0	12	87
5	Kolukhedi	81	1	0	0	0	0	4	76
6	Kurana	131	4	1	0	7	2	26	91
7	Ratatal	119	3	0	0	10	0	22	84
8	Ratibad	49	1	0	0	3	0	6	39
9	Khamkheda	215	3	0	0	1	0	14	197
	<b>Total II</b>	704	16 [2.27]	2 [0.28]	0	26 [3.69]	2 [0.28]	84 [11.94]	574 [81.54]
<b>CONTROL VILLAGE</b>									
10	Manikhedi Kot	59	1	2	0	6	0	8	42
	<b>Total III</b>	59	1 [1.69]	2 [3.39]	0	6 [10.17]	0	8 [13.56]	42 [71.15]
	<b>Grand Total</b>	<b>1245</b>	<b>25</b> [2.01]	<b>13</b> [1.04]	<b>1</b> [0.08]	<b>43</b> [3.45]	<b>7</b> [0.56]	<b>116</b> [9.32]	<b>1040</b> [83.54]

Note : Figures in brackets show percentage to total households.

4.115 The above table shows that 83.54 percent of the households are in the income range of Rs. 1001 and above per month which indicates the affluence level of the area. In adopted villages this percentage is 87.96 while in cluster villages the percentage is 81.54 as compared to total number of households. Even in control village where there is no intervention of K.V.K. the percentage level is 71.19. In the low income range i.e. from Rs. 500.00 and below to Rs. 601.00 to Rs. 700.00 per month the combined average is 3.13 percent to total households which can termed to be negligible. Normally such households are subject to migration during lean agriculture period and require particular income support by the government through various welfare schemes. **However, the overall picture that emerges, proceeds to justify the selection of villages in the categories of adopted and cluster groups as the absorption of agriculture related technology is only possible when occupation of agriculture is pursued on viable scale.**

#### AVERAGE MONTHLY EXPENDITURE

4.116 Here again it may be mentioned that the informants are usually reluctant in giving information regarding their expenditure details. However, through indirect interaction, an attempt has been made to collect the information about the average monthly expenditure of the sample households which is presented in the following table;

Table No. 4.38  
Average Monthly Expenditure

Sl. No.	Name of the Village	No. of Household	Below Rs. 500	Rs. 501-600	Rs. 601-700	Rs. 701-800	Rs. 801-900	Rs. 901-1000	Rs. 1001 and above
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Khajuri	121	5	0	0	0	0	0	116
2	Polashganj	51	0	0	0	2	0	1	48
3	Mugalia Hat	310	8	2	1	4	3	17	275
	<b>Total I</b>	482	13 [2.70]	2 [0.42]	1 [0.21]	6 [1.24]	3 [0.62]	18 [3.73]	439 [91.08]
<b>CLUSTER VILLAGES</b>									
4	Sonkatch	109	1	0	0	4	0	8	96
5	Kolukhedi	81	2	0	0	0	0	1	78
6	Kurana	131	9	4	0	5	2	16	95
7	Ratatal	119	2	2	0	9	0	14	92
8	Ratibad	49	1	0	0	1	0	5	42
9	Khamkheda	215	6	0	1	1	0	1	206
	<b>Total II</b>	704	21 [2.98]	6 [0.85]	1 [0.14]	20 [2.84]	2 [0.28]	45 [6.39]	609 [86.52]
<b>CONTROL VILLAGE</b>									
10	Manikhedi Kot	59	2	1	0	6	0	8	42
	<b>Total III</b>	59	2 [3.39]	1 [1.69]	0	6 [10.17]	0	8 [13.56]	42 [71.19]
	<b>Grand Total</b>	<b>1245</b>	<b>36 [2.89]</b>	<b>9 [0.72]</b>	<b>2 [0.16]</b>	<b>32 [2.57]</b>	<b>5 [0.40]</b>	<b>71 [5.70]</b>	<b>1090 [87.56]</b>

Note : Figures in brackets show percentage to total households.

4.117 In line with income levels, the maximum of 87.56 percent households are within the expenditure range of Rs. 1001.00 and above per month with the break-up of 91.08 percent for adopted villages, 86.52 percent for cluster villages and 71.19 percent for control village. **A portion of expenditure for adopting improved agriculture technology, thus, is obvious particularly in adopted and cluster group of villages.**

4.118 **To sum-up**, it may be mentioned that;

- **The average size of the family for all the identified villages is 7 persons which is more than average size of the family of 5 persons. In village Kurana the average size of the family is 13 persons that needs the special attention of district administration.**
- **Preponderance of households from S.C. communities and O.B.Cs. constituting 84.02 percent to total households is the characteristics of the identified villages with only 5.14 percent of S.T. households hailing from adopted and cluster villages.**
- **The three number of adopted villages have substantial irrigated area along with fair magnitude of cultivable waste land that offers a promise of extension of cultivated area. Selection of these areas as adopted villages is correct as it is comparatively easier to implement the agriculture related technology where there exists absorption capacity for such technologies.**

- The area is predominated by persons following Hindu religion constituting 97.91 percent to total households.
- Agriculture is the main stay of the households residing in ten identified villages as 86.75 percent of households are engaged directly in agriculture, as main occupation. In the group of 'other farmers' mostly consisting of medium and large cultivators 23.37 percent of households are engaged which emphasizes the viable nature of agriculture occupation being pursued in identified ten number of villages.
- Only 18 number of households from adopted and cluster group of villages constituting 1.45 percent to total number of households are engaged in livestock activities as source of main occupation. The activities allied to agriculture is not much developed in the sample area of study.
- In secondary and tertiary sectors where only 0.48 percent families and 6.02 families are engaged is far from being developed. In 'other' group 2.81 percent of households are engaged who do not pursue any fixed line of activity.
- Only 20.40 percent of households are engaged in agriculture as subsidiary occupation, mostly from the categories of marginal farmers, small farmers and agriculture labour.
- In activities allied to agriculture the aggregate percentage of livestock, fisheries and hunting activities is 1.2 which can hardly be termed as any sort of performance in the group of subsidiary occupation.
- The performance of households in subsidiary occupations in secondary and tertiary sectors is negligible.
- Regarding average monthly income, 83.54 percent of the household are in income range of Rs. 1001.00 and above per month, which indicates the affluence level of the area. In adopted villages this percentage is 87.96 while in cluster villages the percentage is 81.54 as compared to total number of households. Even in control village where there is no intervention of K.V.K. the percentage level is 71.19.
- Regarding average monthly expenditure 87.56 percent of households are within the expenditure group of Rs. 1001.00 and above per month.

## **RESULTS OF THE SURVEY – MICRO DIMENSION**

4.119 In this part of the write-up, 25 percent of the households have been identified for detailed enquiry. Though 25 percent of the total of 1245 households comes to 311 but we have taken 314 number of households because mainly due to demographic elements of the households. However, a few number plus or minus from the determined parameter is not very much meaningful so long it does not vitiate the results of the survey.

## **DEMOGRAPHIC PARTICULARS – MALE-FEMALE DISTRIBUTION**

4.120 The table below shows the details;

Table No. 4.39  
Male – Female Distribution

S. No	Name of the Village	No. of Families Selected	No. of Family Members	Male Total	Age, Male Numbers						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Khajuri (Phanda)	30	212	120	28	39	19	15	7	8	4
2.	Polashganj (Bersiya)	13	81	38	17	3	7	6	3	1	1
3.	Mugalia Hat (Phanda)	76	468	245	69	67	29	29	32	9	10
	<b>Adopted Village</b>	119	761	403	114	109	55	50	42	18	15
4.	Sonkatch (Bersiya)	28	169	92	22	21	19	12	8	7	3
5.	Kolukhedi (Bersiya)	21	128	70	29	7	13	10	5	6	0
6.	Kurana (Phanda)	34	221	116	39	21	8	27	9	9	3
7.	Ratatal (Phanda)	30	179	93	23	27	14	13	12	1	3
8.	Ratibad (Phanda)	12	71	39	11	12	4	9	3	0	0
9.	Khamkheda (Phanda)	55	302	179	44	59	20	17	23	7	9
	<b>Cluster Village</b>	180	1070	589	168	147	78	88	60	30	18
10	Manikhedi Kot (Phanda)	15	90	52	16	16	6	9	4	0	1
	<b>Control Village</b>	15	90	52	16	16	6	9	4	0	1
	<b>Total</b>	314	1921	1044	298	272	139	147	106	48	34

Contd ....Table No. 4.39  
Male – Female Distribution

S. No	Name Of The Village	No. Of Families Selected	No. of Family Members	Female Total	Age, Male-Female						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Khajuri (Phanda)	30	212	92	33	15	12	16	7	6	3
2.	Polashganj (Bersiya)	13	81	43	19	8	5	7	2	1	1
3.	Mugalia Hat (Phanda)	76	468	223	66	54	27	39	21	11	5
	<b>Adopted Village</b>	119	761	358	118	77	44	62	30	18	9
4.	Sonkatch (Bersiya)	28	169	77	22	15	13	12	9	3	3
5.	Kolukhedi (Bersiya)	21	128	58	19	11	10	8	6	4	0
6.	Kurana (Phanda)	34	221	105	30	22	13	23	9	6	2
7.	Ratatal (Phanda)	30	179	86	32	13	14	13	10	0	4
8.	Ratibad (Phanda)	12	71	32	13	6	4	7	2	0	0
9.	Khamkheda (Phanda)	55	302	123	23	33	19	22	14	5	7
	<b>Cluster Village</b>	180	1070	481	139	100	73	85	50	18	16
10	Manikhedi Kot (Phanda)	15	90	38	9	8	5	10	3	1	2
	<b>Control Village</b>	15	90	38	9	8	5	10	3	1	2
	<b>Total</b>	314	1921	877	266	185	122	157	83	37	27

4.121 Out of the total number of 1921 family members the male members are 1044 which is 54.35 percent to total number of family members while number of females are 877 constituting 45.65 percent to total number of family members from 314 families identified for detailed enquiry. **The number of males within the population group of 20 to 60 years, which normally represent the labour force of the area, is 440 which is 42.15 percent to total number of males, has twin indications of availability of more persons eligible to work which is a positive indicator and requirement of more employment opportunities for potential workers. In case of females this percentage is 45.50 which is indicative of the**

fact that besides household work more female labour force is available for agriculture being the main occupation of the area. The percentage of dependant population among males, which normally is constituted by the population within 0 to 10 years and 60 years and above, is 31.80 which is a negative factor since this group of population do not contribute much towards family income. Similar is the case with dependent population among females which is 33.41 percent to female population. Fortunately dependent population among males in adopted villages is 16.95 percent that leaves a sufficient ground for implementation of latest technology relating to agriculture in the area. However, in cluster group of villages the percentage of dependent population both among males and females is substantial [31.58 percent for males and 32.22 percent for females]. This is a negative factor of development. This figure is still more high in control village where percentage for males is 58.89 while for females it is 44.44.

## EDUCATIONAL STATUS OF SAMPLE HOUSEHOLDS

4.122 Literacy and education are the prerequisites for adoption of any technology what-so-ever that require mental participation. Therefore, information regarding educational status of the sample household has been collected to study the impact of literacy/education levels over the acceptability of agriculture related technology. The table below shows the details;

Table No. 4.40  
Educational Status

In Numbers

S.N o.	Name of The Village	No. of Families Selected	No. of Family Members	Illiterate	Literate without going to school	Primary	Middle
1	2	3	4	5	6	7	8
1.	Khajuri (Phanda)	30	212	20	2	100	41
2.	Polashganj (Bersiya)	13	81	11	2	78	7
3.	Mugalia Hat (Phanda)	76	468	36	7	201	97
	<b>Adopted Village</b>	119	761	67	11	379	145
4.	Sonkatch (Bersiya)	28	169	24	2	40	33
5.	Kolukhedi (Bersiya)	21	128	23	0	37	17
6.	Kurana (Phanda)	34	221	16	2	200	29
7.	Ratatal (Phanda)	30	179	30	7	75	35
8.	Ratibad (Phanda)	12	71	6	1	50	17
9.	Khamkheda (Phanda)	55	302	54	0	102	72
	<b>Cluster Village</b>	180	1070	153	12	504	203
10	Manikhedi Kot (Phanda)	15	90	10	0	23	20
	<b>Control Village</b>	15	90	10	0	23	20
	<b>Total</b>	314	1921	230	23	906	368

Table No. 4.40  
Educational Status [Contd...]

In Numbers

S. No.	Name of The Village	No. of Families Selected	No. of Family Members	High School	Higher School	Gra- duate	Post Graduate	Others
1	2	3	4	9	10	11	12	13
1.	Khajuri (Phanda)	30	212	32	15	2	0	0
2.	Polashganj (Bersiya)	13	81	9	3	3	0	0
3.	Mugalia Hat (Phanda)	76	468	47	28	5	0	0
	<b>Adopted Village</b>	119	761	88	46	10	0	0
4.	Sonkatch (Bersiya)	28	169	41	4	1	1	0
5.	Kolukhedi (Bersiya)	21	128	15	6	2	0	0
6.	Kurana (Phanda)	34	221	21	12	0	0	0
7.	Ratatal (Phanda)	30	179	17	3	3	0	1
8.	Ratibad (Phanda)	12	71	6	4	0	0	0
9.	Khamkheda (Phanda)	55	302	55	19	9	1	0
	<b>Cluster Village</b>	180	1070	155	48	15	2	1
10	Manikhedi Kot (Phanda)	15	90	25	0	4	0	0
	<b>Control Village</b>	15	90	25	0	4	0	0
	<b>Total</b>	314	1921	268	94	29	2	1

4.123 A total of 230 persons have been reported to be illiterate which is 11.97 percent to total number of family members of 1921 persons from 314 identified sample families. The situation is not dismal since the literacy percentage is 88.03 which is amazingly high. The percentage of elementary education [primary + middle levels] is 66.32 which clearly shows the impact of the programme of the universalisation of the Elementary Education Programme in the area. The extent of higher education is not impressive, reason being the lack of higher educational facilities in the area. **However, the overall educational situation that emerges proceeds to show the absorption capacity of the people of the sample area to adopt latest technology regarding agriculture imparted particularly by the K.V.K.**

#### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – MAIN OCCUPATION

4.124 Out of the total of 1921 members of the sample households 359 number of persons have been reported to be engaged in various main occupations which comes to 18.69 percent to total number of persons in identified sample households for detailed enquiry. In what follows an attempt has been made to analyse the information pertaining to main occupation.

#### AGRICULTURAL OCCUPATIONS

4.125 The table below shows the distribution of persons engaged in agricultural occupation;



Table No. 4.41  
Main Occupation - Agriculture

S.No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Khajuri (Phanda)	30	212	11	1	21	0
2.	Polashganj (Bersiya)	13	81	0	0	17	1
3.	Mugalia Hat (Phanda)	76	468	8	0	74	2
	<b>Adopted Village</b>	119	761	19	1	112	3
4.	Sonkatch (Bersiya)	28	169	3	0	25	1
5.	Kolukhedi (Bersiya)	21	128	6	1	16	0
6.	Kurana (Phanda)	34	221	16	1	19	1
7.	Ratatal (Phanda)	30	179	11	0	21	0
8.	Ratibad (Phanda)	12	71	0	0	12	1
9.	Khamkheda (Phanda)	55	302	13	1	45	0
	<b>Cluster Village</b>	180	1070	49	3	138	3
10	Manikhedi Kot (Phanda)	15	90	2	0	13	0
	<b>Control Village</b>	15	90	2	0	13	0
	<b>Total</b>	314	1921	70	4	263	6

**Note :** Information in brackets shows the name of the Development Block where the village is located. This factor is common to all subsequent tables.

4.126 One of the satisfactory trends depicted by the above table is that bulk of the farming community is from the category of 'farmers' consisting of middle level and big cultivators [263 in number] constituting 13.69 percent to total number of 1921 persons and 73.26 percent to total of 359 persons pursuing various main occupations. The combined percentage of small and marginal farmers and agriculture labour is 4.16 percent to total number of 1921 persons identified for detailed enquiry and 22.28 percent to total of 359 persons engaged in various main occupations. **The application of agriculture related technology through K.V.K. in particular and other agencies in general is convenient in adopted villages where the percentage of farmers to the total family members as well as to total persons pursuing various main occupations are 14.72 and 31.20 respectively. In case of cluster villages these percentages are 12.90 and 38.44 respectively. The selection of these villages within adopted and cluster groups is justified for obvious simple reason of capacity to adopt the technology on sustainable basis.**

## OCCUPATIONS ALLIED TO AGRICULTURE

Table No. 4.42  
Main Occupation – Allied to Agriculture

S.No	Name of The Village	No. of families selected	No. of family members	Minor Forest Produce Collection	Live stock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7	8
1.	Khajuri (Phanda)	30	212	0	0	0	0
2.	Polashganj (Bersiya)	13	81	0	1	0	0
3.	Mugalia Hat (Phanda)	76	468	0	1	0	0
	<b>Adopted Village</b>	119	761	0	2	0	0
4.	Sonkatch (Bersiya)	28	169	0	0	1	0
5.	Kolukhedi (Bersiya)	21	128	1	3	0	0
6.	Kurana (Phanda)	34	221	1	0	0	0
7.	Ratatal (Phanda)	30	179	0	1	1	0
8.	Ratibad (Phanda)	12	71	0	0	0	0
9.	Khamkheda (Phanda)	55	302	2	2	0	0
	<b>Cluster Village</b>	180	1070	4	6	2	0
10	Manikhedi Kot (Phanda)	15	90	0	2	0	0
	<b>Control Village</b>	15	90	0	2	0	0
	<b>Total</b>	314	1921	4	10	2	0

4.127 One of the mandates of the K.V.K. is to encourage the activities allied to agriculture particularly that of animal husbandry and fisheries by application of technological advancement to augment income. The above table clearly shows the near absence of such activities in our sample area of study relating to sample households. Only 12 number of persons are engaged in livestock and fishing activities that hardly offer a field for application of technologies.

## OCCUPATIONS RELATING TO SECONDARY/TERTIARY SECTORS AND OTHERS

4.128 The K.V.Ks. offer training to unemployed youth for self-employment particularly in secondary sector. The complete absence of such activities among sample population identified for detailed enquiry is dismal as it provides no scope for such extension activity by the K.V.K. The table has not been given as the information is nil.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS IN SUBSIDIARY OCCUPATIONS – AGRICULTURE

4.129 Out of the total of 1921 persons, 17 number of persons [all in agriculture occupation] are having subsidiary occupation. The table below shows the details;

Table No. 4.43  
Subsidiary Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Khajuri (Phanda)	30	212	1	0	1	0
2.	Polashganj (Bersiya)	13	81	0	0	0	0
3.	Mugalia Hat (Phanda)	76	468	1	1	1	0
	<b>Adopted Village</b>	119	761	2	1	2	0
4.	Sonkatch (Bersiya)	28	169	1	0	2	1
5.	Kolukhedi (Bersiya)	21	128	0	0	0	0
6.	Kurana (Phanda)	34	221	0	0	1	6
7.	Ratatal (Phanda)	30	179	0	0	1	0
8.	Ratibad (Phanda)	12	71	0	0	0	0
9.	Khamkheda (Phanda)	55	302	0	0	0	0
	<b>Cluster Village</b>	180	1070	1	0	4	7
10	Manikhedi Kot(Phanda)	15	90	0	0	0	0
	<b>Control Village</b>	15	90	0	0	0	0
	<b>Total</b>	314	1921	3	1	6	7

4.130 The above table shows the involvement only 17 persons in agriculture related occupations, which is hardly a meaningful picture.

#### AVERAGE MONTHLY INCOME

4.131 The table below shows the details;

Table No. 4.44  
Average Monthly Income

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 and Above
1	2	3	4	5	6	7	8	9	10	11
1.	Khajuri (Phanda)	30	212	30	0	0	0	0	2	180
2.	Polashganj(Bersiya)	13	81	14	0	0	0	0	0	67
3.	Mugalia Hat Phanda)	76	468	81	0	0	0	0	0	387
	<b>Adopted Village</b>	119	761	125	0	0	0	0	2	634
4.	Sonkatch (Bersiya)	28	169	26	0	0	0	0	0	143
5.	Kolukhedi (Bersiya)	21	128	22	0	0	0	0	1	105
6.	Kurana (Phanda)	34	221	34	0	0	0	0	1	186
7.	Ratatal (Phanda)	30	179	30	0	0	0	0	0	149
8.	Ratibad (Phanda)	12	71	12	0	0	0	0	0	59
9.	Khamkheda (Phanda)	55	302	59	0	0	0	0	2	241
	<b>Cluster Village</b>	180	1070	183	0	0	0	0	0	883
10	Manikhedi Kot(Phanda)	15	90	17	0	0	0	0	0	73
	<b>Control Village</b>	15	90	0	0	0	0	0	0	73
	<b>Total</b>	314	1921	325 [16.92]	0	0	0	0	6 [0.31]	1590 [82.77]

4.132 The above table shows that 82.77 percent family members are within the income range of Rs. 1001 and above per month which is obvious as most of farmers are pursuing agriculture in viable manner with medium and large holdings.

#### AVERAGE MONTHLY EXPENDITURE

4.133 The table below shows the details;

Table No. 4.45  
Average Monthly Expenditure

S.No	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 and Above
1	2	3	4	5	6	7	8	9	10	11
1.	Khajuri (Phanda)	30	212	29	0	0	2	0	0	181
2.	Polashganj (Bersiya)	13	81	14	0	0	0	0	0	67
3.	Mugalia Hat (Phanda)	76	468	75	0	0	0	0	4	389
	<b>Adopted Village</b>	119	761	118	0	0	2	0	4	637
4.	Sonkatch (Bersiya)	28	169	26	0	0	0	0	1	142
5.	Kolukhedi (Bersiya)	21	128	16	0	0	0	0	2	110
6.	Kurana (Phanda)	34	221	33	0	0	0	0	1	187
7.	Ratatal (Phanda)	30	179	30	0	0	0	0	0	149
8.	Ratibad (Phanda)	12	71	11	0	0	0	0	0	60
9.	Khamkheda (Phanda)	55	302	55	0	0	0	0	3	244
	<b>Cluster Village</b>	180	1070	171	0	0	0	0	7	892
10	Manikhedi Kot (Phanda)	15	90	14	0	0	0	0	2	74
	<b>Control Village</b>	15	90	14	0	0	0	0	2	74
	<b>Total</b>	314	1921	303 [1577]	0	0	2 [0.10]	0	13 [0.68]	1603 [83.45]

4.134 In line with information pertaining to income, 83.45 percent of family members are within the expenditure range of Rs. 1001 and above per month.

#### 4.135 To sum-up;

- The percentage of males within the age group of 20 to 60 years representing the labour force is 42.15 while that for females it is 45.50 percent indicating the availability of eligible work force.
- The percentage of dependent male population, considered from the age groups of 0 to 10 years and 60 years and above is 31.80 and for females it is 33.41 percent which is negative demographic characteristics, since this group of population do not contribute much towards family income.
- The literacy percentage being 88.03 percent in the sample area is amazingly high. The overall educational situation that emerges show the absorption capacity of the people of the sample area to adopt latest technology regarding agriculture imparted by the K.V.K.
- The bulk of the farming communities is from the category of 'farmers' consisting of middle level and big cultivators [263 in number] constituting 72.26 percent to total of 359 persons pursuing various main occupations that denotes feasibility to implement various technology related to agriculture, particularly by the K.V.K. in our area of study.

- **Only 12 number of persons are engaged in livestock and fishing activities in our area of study as main occupation which hardly offers any scope for bringing new technology in the field of animal husbandry and fisheries.**
- **The complete absence of main occupation in secondary and tertiary sectors is another dismal factor that provides no scope for extension activities by the K.V.K. in our area of study.**
- **Only 17 persons are pursuing agriculture as subsidiary occupation. In rest of the categories there is total absence of involvement of any person in any occupation**
- **Regarding average monthly income 82.77 percent of family members are within the income range of Rs. 1001 and above per month which is obvious as most of the farmers are pursuing agriculture in viable manner. Similarly 83.45 percent of family members are within the expenditure range of Rs. 1001 and above per month.**

### **SUBJECTS OF TRAINING RECEIVED**

4.136 At the outset, it is, perhaps, necessary to clarify the point that there are 290 number of families who took part in vocational training, front line demonstration and on farm testing which are the three basic mandates of K.V.K. Therefore, the total of responding families from vocational training, front line demonstration and on farm testing will not tally with the figure of 290 as from this basis figure of 290 the responding families participated in three fundamental activities. The entire analysis is based upon family approach as normally one member from each family from adopted and cluster villages where there is direct intervention of K.V.K. takes part in various training programmes. **It is evident that in what follows only adopted and cluster villages have been taken into account, i.e. 9 number of villages, excluding one control village where there is no intervention of K.V.K.**

4.137 **Out of the total of 314 families identified for detailed enquiry, 290 families have responded to the various training and demonstration initiatives of the K.V.K. constituting 92.36 percent to total identified households which, of course, is an encouraging fact that shows awareness and intent of the cultivators to adopt various technologies related to agriculture.** In what follows an attempt has been made to present the item wise details of various initiatives adopted by the K.V.K. in the fields of vocational training, front line demonstration and on farm testing.

### **VOCATIONAL TRAINING**

4.138 The table shows the details;

Table No. 4.46  
Subjects of Training Received – Vocational Training

S.No	Name Of The Village	No. of Respondent Families	*Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Livestock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
	Khajuri (Phanda)	30	30	6	5	0
	Polashganj (Bersiya)	13	13	7	2	0
	Mugalia Hat (Phanda)	77	77	18	5	0
I	<b>Adopted Village</b>	120	120	31	12	0
	Sonkatch (Bersiya)	27	27	6	0	0
	Kolukhedi (Bersiya)	20	20	5	6	0
	Kurana (Phanda)	27	27	10	0	0
	Ratatal (Phanda)	30	30	8	0	0
	Ratibad (Phanda)	12	12	5	0	0
	Khamkheda (Phanda)	54	54	13	9	0
II	<b>Cluster Villages</b>	170	170	47	15	0
	<b>Total All Villages</b>	290	290	78	27	0

Table No. 4.46 [Contd...]  
Subjects of Training Received – Vocational Training

S.No	Name Of The Village	*Subject On Which Training Received				
		Home Science	Training Of Rural Youth	Agro Forestry	Organic Farms	Water Shed Activities
1	2	8	9	10	11	12
	Khajuri (Phanda)	6	2	5	0	4
	Polashganj (Bersiya)	4	2	3	0	3
	Mugalia Hat (Phanda)	28	7	2	0	14
I	<b>Adopted Village</b>	38	11	10	0	21
	Sonkatch (Bersiya)	4	2	6	0	2
	Kolukhedi (Bersiya)	1	5	8	0	5
	Kurana (Phanda)	2	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0
	Ratibad (Phanda)	4	0	2	0	0
	Khamkheda (Phanda)	8	4	11	0	10
II	<b>Cluster Villages</b>	19	11	27	0	17
	<b>Total All Villages</b>	57	22	37	0	38

4.139 The above table shows that cent-percent families i.e. 290, responded to the various training programmes relating to crop production. The next popular programme is relating to horticulture where 78 households forming 26.90 percent to total respondent families have reacted to the training effort of K.V.K. **Home Science, watershed activities and agro-forestry are different subjects where number of households involved are 57,38,37 respectively that shows the interest of the households to diversify their activities, besides agriculture, for augmentation of income.** Livestock, dairy and poultry and training of rural youth where only 9.31 percent and 7.59 percent households respectively are involved, clearly shows the lack of interest of the households in such subjects.

## FRONT LINE DEMONSTRATION

4.140 The main objective of the front line demonstration is to demonstrate newly released crop production and protection technologies and its management practices in the farmer's fields. However, in front line demonstrations, the interactions regarding home science activities, training of rural youth and all the other items as specified for vocational training are done to educate and the farmers for augmentation of income. The table below shows the details;

Table No. 4.47  
Subjects of Training Received – Front Line Demonstration

S.No	Name Of The Village	No. of Respondent Families	Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Livestock Dairy Poultry	Fisheries
1	2	3	4	5	6	7
	Khajuri (Phanda)	15	15	5	0	0
	Polashganj (Bersiya)	13	13	3	0	0
	Mugalia Hat (Phanda)	13	11	13	0	0
<b>I</b>	<b>Adopted Village</b>	41	39	21	0	0
	Sonkatch (Bersiya)	15	15	3	0	0
	Kolukhedi (Bersiya)	11	11	3	0	0
	Kurana (Phanda)	7	7	5	0	0
	Ratatal (Phanda)	9	9	5	0	0
	Ratibad (Phanda)	8	8	2	0	0
	Khamkheda (Phanda)	23	23	10	0	0
<b>II</b>	<b>Cluster Villages</b>	73	73	19	0	0
	<b>Total All Villages</b>	114	112	40	0	0

Table No. 4.47 [Contd...]  
Subjects of Training Received – Front Line Demonstration

S.No	Name Of The Village	Subject On Which Training Received				
		Home Science	Training Of Rural Youth	Agro Forestry	Organic Farms	Water Shed Activities
1	2	8	9	10	11	12
	Khajuri (Phanda)	0	0	3	0	2
	Polashganj (Bersiya)	0	0	2	0	0
	Mugalia Hat (Phanda)	0	0	1	0	0
<b>I</b>	<b>Adopted Village</b>	0	0	6	0	2
	Sonkatch (Bersiya)	0	0	2	0	0
	Kolukhedi (Bersiya)	0	0	2	0	0
	Kurana (Phanda)	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0
	Ratibad (Phanda)	0	0	1	0	0
	Khamkheda (Phanda)	0	0	8	0	0
<b>II</b>	<b>Cluster Villages</b>	0	0	13	0	0
	<b>Total All Villages</b>	0	0	19	0	2

4.141 The above table shows that out of 290 responding families 114 i.e. 39.31 percent households have responded to the various programmes of front line demonstration which is, reasonably, a fair response. Here again, like vocational training, crop production [agronomy] group seems very popular where 112 households were involved for having demonstration regarding newly released crop production and protection technologies followed by horticulture where 40 number of households showed interest, followed by 19 households in agro-forestry and 2 households in watershed activities. **A total gap is seen in the fields like livestock, dairy and poultry, fisheries, home science and organic farming activities which again indicate to one point that cultivators are basically interested in enhancing their agriculture related productivity which, firstly, they understand even without formal education and secondly their clear understanding that once the income from agriculture is enhanced the other activities allied to agriculture will naturally be taken care of because of a secure financial position.**

## ON FARM TESTING

4.142 In this practice the farmers participate in identifying problems and its priorities and managing experiment and evaluating results. It is, therefore, an adaptive research with farmers perspective. The basic objective of on farm testing is to identify existing inputs or practices that might help to solve major problems of many farmers in a defined study area. The table below shows the details;

Table No. 4.48  
Subjects of Training Received – On Farm Testing

S.No	Name Of The Village	No. of Respondent Families	Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Livestock Dairy Poultry	Fisheries
1	2	3	4	5	6	7
	Khajuri (Phanda)	1	1	0	0	0
	Polashganj (Bersiya)	2	2	0	0	0
	Mugalia Hat (Phanda)	7	7	1	0	0
I	<b>Adopted Village</b>	10	10	1	0	0
	Sonkatch (Bersiya)	3	3	0	0	0
	Kolukhedi (Bersiya)	2	2	0	0	0
	Kurana (Phanda)	0	0	0	0	0
	Ratatal (Phanda)	3	3	0	0	0
	Ratibad (Phanda)	1	1	0	0	0
	Khamkheda (Phanda)	3	3	0	0	0
II	<b>Cluster Villages</b>	12	12	0	0	0
	<b>Total All Villages</b>	22	22	1	0	0



Table No. 4.48 [Contd...]  
Subjects of Training Received – On Farm Testing

S.No	Name Of The Village	Subject On Which Training Received				
		Home Science	Training Of Rural Youth	Agro Forestry	Organic Farms	Water Shed Activities
1	2	8	9	10	11	12
	Khajuri (Phanda)	0	0	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0
	Mugalia Hat (Phanda)	0	0	0	0	0
I	<b>Adopted Village</b>	0	0	0	0	0
	Sonkatch (Bersiya)	0	0	0	0	0
	Kolukhedi (Bersiya)	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0
	Khamkheda (Phanda)	0	0	0	0	0
II	<b>Cluster Villages</b>	0	0	0	0	0
	<b>Total All Villages</b>	0	0	0	0	0

4.143 The above table shows that out of the total of 290 responding households only 22 households [7.59 percent to total responding households] have participated in the programme of on farm testing. A crowded participation is not expected as only bigger farmers having particular problem can afford testing the improved practices in their fields. Here again in crop production [agronomy] practices 22 number of households and one household in horticulture were involved. In rest of the fields, there was no participation at all.

**4.144 The conclusion that can be drawn from above narration is that crop production [agronomy] and horticulture are the areas where the cultivators are interested as these areas have direct relevance to their occupation. The other areas are home science, watershed, agro forestry and training of rural youth where the villagers have some interest. Livestock and poultry activities, fisheries and organic farming are the areas where the villagers have hardly any interest as the participation in such training programmes is almost nil.**

#### **IMPACT OF K.V.K.**

4.145 In the foregoing paragraphs an analysis of subject wise training received has been presented. In what follows an attempt has been made to present the impact of individual items of training in the broad categories of;

- Vocational Training
- Front Line Demonstration
- On Farm Testing

**both before and after training [BT, AT] situations. This is the most important part of the report that clearly indicates the impact of K.V.K's. intervention on agronomy, horticulture, livestock and dairying, fisheries, home science etc.**

## VOCATIONAL TRAINING – AGRONOMY - CEREALS

4.146 The table below shows the impact of K.V.K's. intervention over cereal crops;

Table No. 4.49  
Agronomy – Cereals

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Wheat			Paddy		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	12	1950	2001	0	0	0
	Polashganj (Bersiya)	13	1981	2008	2	680	701
	Mugalia Hat (Phanda)	49	1990	2110	0	0	0
<b>I</b>	<b>Adopted Village</b>	74			2		
	Sonkatch (Bersiya)	19	1985	2112	0		
	Kolukhedi (Bersiya)	12	1975	2115	0	0	0
	Kurana (Phanda)	10	1982	2110	0	0	0
	Ratatal (Phanda)	15	1979	2115	0	0	0
	Ratibad (Phanda)	9	1958	2005	0	0	0
	Khamkheda (Phanda)	17	1955	2110	5	582	699
<b>II</b>	<b>Cluster Villages</b>	82			7		
	<b>Total All Villages</b>	156			9		

Table No. 4.49 [Contd...]  
Agronomy – Cereals

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Maize			Jowar		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	2	1450	2100	2	400	1000
	Polashganj (Bersiya)	3	1800	2050	0	0	0
	Mugalia Hat (Phanda)	15	1650	1819	0	0	0
<b>I</b>	<b>Adopted Village</b>	20			2		
	Sonkatch (Bersiya)	7	1300	1801	0	0	0
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	2	800	1000
	Ratatal (Phanda)		0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	13	1450	2105	1	600	1005
<b>II</b>	<b>Cluster Villages</b>	20			3		
	<b>Total All Villages</b>	40			5		

4.147 Among cereals wheat and to some extent maize are the important crops of Bhopal district.

- 4.148 **Regarding wheat crop** a total of 156 head of the households against the total of 290 families have responded to the vocational training that constitutes 53.79 percent to the total households. **The yield per hectare before training [BT] ranged between 1955 kg in village Khamkheda [cluster village] to 1990 kg in village Mugalia Hat [adopted village] which is above the district average of 1837 kg and State average of 1867 kg. The after training scenario is much brighter wherein the yield per hectare ranged between 2001 kg in village Khajuri [adopted village] to 2115 kg in village Ratatal [cluster village]. The yield per hectare both in the situations of BT and AT is higher than the district and State averages that clearly indicates the positive effects of vocational training imparted by K.V.K. over the wheat crop.**
- 4.149 **As regards paddy crop** only 9 families [2 number of families from adopted villages and 7 number of families from cluster villages] took part in vocational training with yield rate per hectare ranging between 582 kg for village Khamkheda [cluster village] to 680 kg for Polashganj [adopted village] in BT situation and 699 kg for village Khamkheda to 701 kg for Polashganj in AT situation. **The yield per hectare after training [AT] though is less than district and State averages of 727 kg and 1058 kg respectively but definitely higher than the before training situations. Moreover for district Bhopal, paddy is comparatively a less important crop as is evident from number of families responding to vocational training.**
- 4.150 **Regarding Maize crop** the total responding families are 40 with equal number of participation from both adopted and cluster villages forming 13.79 percent to total responding families. During BT the maximum per hectare yield was reported to 1800 kg [more than the State average] for Polashganj which is one of the adopted villages while the minimum per hectare yield reported was 1300 kg from Sonkatch [cluster village]. The after training [AT] situation being 2105 kg in village Khamkheda and 1801 kg in village Sonkatch [cluster village] is better than the district average of 1566 kg per hectare and less than the state average figure of 2072 kg for most of the reporting villages. The impact of the vocational training over the maize crop is obviously good when compared particularly with the district average.
- 4.151 **Jowar being unimportant crop of Bhopal district only 5 number of households have participated in vocational training that constitutes only 1.72 percent to total households.** The per-hectare yield before training though is less than the district average and State average of 1216 kg and 1342 kg respectively **but the after training situation is better which ranged between 1000 kg for villages Khajuri and Kurana to 1005 kg for village Khamkheda, which is higher than before training scenario. The positive impact of the K.V.K. is, thus, obvious.**

#### VOCATIONAL TRAINING – AGRONOMY – PULSES

- 4.152 The table below shows the details;

Table No. 4.50  
Agronomy – Pulses

Sl. No.	Name of the Village	Yield Per – Hectare – Kg								
		Gram			Arhar			Lentil		
		No. of responding families	BT	AT	No. of responding families	BT	AT	No. of responding families	BT	AT
	Khajuri (Phanda)	5	1100	1800	1	1000	1500	0	0	0
	Polashganj (Bersiya)	11	1000	1200	0	0	0	4	800	1000
	Mugalia Hat (Phanda)	26	1075	1120	16	1110	1540	17	806	1005
<b>I</b>	<b>Adopted Village</b>	42			17			21		
	Sonkatch (Bersiya)	10	1001	1170	6	1120	1500	0	0	0
	Kolukhedi (Bersiya)	10	1058	1152	0	0	0	0	0	0
	Kurana (Phanda)	12	1082	1162	0	0	0	0	0	0
	Ratatal (Phanda)	12	1110	1235	1	1123	1500	0	0	0
	Ratibad (Phanda)	7	1050	1256	0	0	0	0	0	0
	Khamkheda (Phanda)	9	1058	1161	6	1005	1215	0	0	0
<b>II</b>	<b>Cluster Villages</b>	60			13			0		
	<b>Total All Villages</b>	102			30			21		

4.153 In pulses group Gram and Arhar are comparatively important crops for Bhopal district. **Regarding Gram**, against the total of 290 households, 102 household [35.17 percent] have participated in vocational training. **The after training performance that resulted in per hectare yield ranging between 1256 kg for village Ratibad [cluster village] to 1161 kg for village Khamkheda [cluster village] is much higher than district average of 1002 kg and State average of 932 kg per hectare.**

4.154 **Arhar being comparatively less important crop in pulses group for Bhopal district, 30 household [10.34 percent to total households] have responded to vocational training which is reflected in enhanced productivity in after training situation that ranged between 1215 kg per hectare for village Khamkheda [cluster village] to 1540 kg for Mugalia Hat [adopted village], far more than district average of 550 kg per hectare and State average of 825 kg per hectare. The positive intervention of the K.V.K. is, thus, obvious.**

4.155 Regarding lentil, only 21 households which is 7.24 percent to total households have attended the vocational training. All the households are from the adopted villages. **The AT situation is reflected in enhanced productivity that ranged between 1000 kg for Polashganj to 1005 kg for village Mugalia hat, which are much higher than district average productivity of 484 kg per hectare.**

#### VOCATIONAL TRAINING - AGRONOMY – OIL SEEDS

4.156 The table below shows the details;

Table No. 4.51  
Agronomy – Oil Seeds

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Soybean			Mustard		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	29	1005	1174	0	0	0
	Polashganj (Bersiya)	13	1112	1142	3	805	1600
	Mugalia Hat (Phanda)	77	1129	1146	13	800	1112
I	<b>Adopted Village</b>	119			16		
	Sonkatch (Bersiya)	26	1127	1139	2	0	1115
	Kolukhedi (Bersiya)	20	1110	1137	0	0	0
	Kurana (Phanda)	21	1115	1150	0	0	0
	Ratatal (Phanda)	30	1125	1158	0	0	0
	Ratibad (Phanda)	12	1128	1172	2	858	1115
	Khamkheda (Phanda)	51	1125	1189	1	870	1137
II	<b>Cluster Villages</b>	160			5		
	<b>Total All Villages</b>	279			21		

- 4.157 Soybean being important cash crop of Bhopal district, 279 number of families against 290 families have responded to various vocational training programmes organized by the K.V.K. that comes to 96.21 percent to total households. **For every village the after training [AT] status is better than before training status [BT] that clearly shows the positive impact of the vocational training. In after training situation, the productivity ranged between 1137 kg per-hectare for village Kolukhedi to 1189 kg for village Khamkheda which are higher than the district status of 1076 kg and State average of 1132 kg per hectare.**
- 4.158 Mustard though is an important cash crop, the response is not very bright as only 21 households have responded to the various vocational training programmes forming 7.24 percent to total number of sample households. **The productivity in after training situation is better than that of before training that ranged between 1112 kg per-hectare for village Mugalia Hat to 1600 kg for Polashganj, higher than district and State average figures of 818 kg and 1009 kg respectively. The impact of the K.V.Ks. effort is thus obvious.**
- 4.159 **The participation of the households for receiving training on crops like cotton, sugarcane, linseed is nil that clearly indicates the lack of interest of cultivators of Bhopal district in pursuing the cultivation of these crops.**
- 4.160 Horticulture crops are important as they generate employment opportunities and income. Being perennial, these crops also help in checking soil erosion and provide high density green cover to the soil. Being tough many of these crops can successfully be grown on waste land not suitable for traditional crop cultivation. The important strategies adopted for the Tenth Plan are extensive fruit tree plantation on government and private fallow land and by the side of state highways and irrigation canals, popularizing plantation of medicinal and aromatic varieties, providing improved variety of vegetable seed to the cultivators and agriculture labour living below the poverty line and adopting cluster approach in selected villages for the development of horticulture produce. Against this background the information has been collected as shown in the following table;

Table No. 4.52  
Horticulture Crops

Sl. No.	Name of the Village	Yield Per – Hectare – Quintal					
		Potato			Onion		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	3	110	205	2	100	180
	Polashganj (Bersiya)	0	0	0	0	0	0
	Mugalia Hat (Phanda)	1	100	125	3	98	140
I	<b>Adopted Village</b>	4			5		
	Sonkatch (Bersiya)	0	0	0	0	0	0
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	2	105	131	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	3	110	132	2	97	135
II	<b>Cluster Villages</b>	5			2		
	<b>Total All Villages</b>	9			7		

Table No. 4.52 [ Contd... ]  
Horticulture Crops

Sl. No.	Name of the Village	Yield Per – Hectare – Quintal					
		Tomato			Brinjal		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	4	110	182	5	185	237
	Polashganj (Bersiya)	2	120	171	3	133	151
	Mugalia Hat (Phanda)	7	115	170	6	150	190
I	<b>Adopted Village</b>	13			14		
	Sonkatch (Bersiya)	3	121	162	4	131	195
	Kolukhedi (Bersiya)	1	120	180	1	150	192
	Kurana (Phanda)	4	121	171	5	135	190
	Ratatal (Phanda)	3	125	181	3	140	191
	Ratibad (Phanda)	3	128	191	1	200	240
	Khamkheda (Phanda)	4	129	198	6	115	190
II	<b>Cluster Villages</b>	18			20		
	<b>Total All Villages</b>	31			34		

Table No. 4.52 [ Contd...]

## Horticulture Crops

Sl. No.	Name of the Village	Yield Per – Hectare – Quintal					
		Chilli			Bhindi		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	2	70	110
	Polashganj (Bersiya)	1	190	200	3	78	105
	Mugalia Hat (Phanda)	2	101	165	4	82	98
<b>I</b>	<b>Adopted Village</b>	3			9		
	Sonkatch (Bersiya)	1	190	230	3	84	101
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	2	105	151	1	95	130
	Ratatal (Phanda)	1	200	250	3	90	115
	Ratibad (Phanda)	1	150	210	2	98	120
	Khamkheda (Phanda)	2	152	198	3	100	125
<b>II</b>	<b>Cluster Villages</b>	7			12		
	<b>Total All Villages</b>	10			21		

Table No. 4.52 [ Contd...]

## Horticulture Crops

Sl. No.	Name of the Village	Yield Per – Hectare – Quintal					
		Cucurbits			Mango		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	0	0	0
	Polashganj (Bersiya)	2	0	125	2	175	250
	Mugalia Hat (Phanda)	1	0	100	0	0	0
<b>I</b>	<b>Adopted Village</b>	3			2		
	Sonkatch (Bersiya)	0	0	0	0	0	0
	Kolukhedi (Bersiya)	0	0	0	3	0	215
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	2	110	171	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	1	0	115	1	0	256
<b>II</b>	<b>Cluster Villages</b>	3			4		
	<b>Total All Villages</b>	6			6		

Table No. 4.52 [ Contd...]  
Horticulture Crops

Sl. No.	Name of the Village	Yield Per – Quintal								
		Papaya			Citrus			Other		
		No. of responding families	BT	AT	No. of responding families	BT	AT	No. of responding families	BT	AT
	Khajuri (Phanda)	0	0	0	0	0	0	0	0	0
	Polashganj (Bersiya)	0	0	0	2	0	30	0	0	0
	Mugalia Hat (Phanda)	1	92	150	0	0	0	0	0	0
<b>I</b>	<b>Adopted Village</b>	1			2			0		
	Sonkatch (Bersiya)	0	0	0	0	0	0	0	0	0
	Kolukhedi (Bersiya)	0	0	0	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0	0	0	0
	Ratatal (Phanda)	2	191	251	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0	0	0	0
	Khamkheda (Phanda)	0	0	0	0	0	0	1	0	50 [Garlic]
<b>II</b>	<b>Cluster Villages</b>	2						1		
	<b>Total All Villages</b>	3			2			1		

4.161 The above table shows that **in case of potato** only 9 number of families have responded to the vocational training programme which is 3.10 percent to total of 290 families. The per-hectare yield has enhanced in every reporting village after receiving the training which ranged **between 125 quintal per hectare in case of village Mugalia Hat to 205 quintal in case of village Khajuri, higher than the district average of 115 quintal and State average of 119 quintal.**

4.162 **Regarding onion only** 7 member of families [2.41 percent to total number of sample families] took vocational training resulting in increased per-hectare yield after receiving the training as compared to before training [BT] situations. **The after training results ranged between 125 quintal per hectare for the village Mugalia hat to 205 quintal for Khajuri which are above the district average of 115 quintal per-hectare and State average of 119 quintal per-hectare.**

4.163 **Tomato is yet** another crop gradually becoming popular as 31 families have responded to the vocational training programme constituting 10.69 percent to total number of families. **The after training scenario as compared to before training status is better in case of every reporting village. A comparison with district and State averages is not possible because of the absence of such information.** Similar is the case with **brinjal crop** wherein 34 families have taken the advantage of vocational training **which resulted in better performance reflected in the shape of enhanced per-hectare yield in after training situations as compared to before training.** The non-availability of per-hectare yield figures of district and State levels is a constraint for comparing the information with sample villages.



- 4.164 **Chilly and bhindi** are the crops wherein 10 and 21 families respectively have responded to the vocational training programme that constitute 3.45 percent and 7.25 percent respectively to the total number of 290 sample families. **The difference between per-hectare yields in before and after training situations are substantial that obviously shows the impact of the vocational training programme initiated by the K.V.K.**
- 4.165 **In the group of cucerbites, mango crop, papaya, citrus crops and other crops the number of families responded are only 6,6,3,2 and 1 respectively which can hardly be termed as an encouraging picture.** However, the yield per hectare in after training situation is better than before training position that vouches for the positive impact of vocational training. The absence of district and State average figures have resulted in absence of comparison with the yield rates of sample villages.
- 4.166 **However, the conclusion that can be drawn from the above narration is that the horticulture related crops are yet to make an impact over the prevailing cropping pattern of the district.**

#### VOCATIONAL TRAINING – LIVESTOCK AND DAIRY

4.167 An important component of agricultural diversification is animal husbandry including dairying and poultry which hold immense promise for improving the rural livelihoods by providing additional source of income and employment, specially to land less and small and marginal farmers. Proper development of this sector will require attention not only to technology, processing and marketing arrangements but also to issues of animal welfare. Among many strategies laid down for the Tenth Plan the subsidy programme for purchase of animal feed cutters by the cultivators, initiating programme of extending subsidy for constructing silage pits by the cultivators to popularize stall feeding and provision of goat units to persons living below the poverty line are important. However, the situation at the grass roots relating to animal husbandry is not that encouraging as is revealed by the survey results. The table below shows the details;

Table No. 4.53  
Live Stock and Dairying

Sl. No.	Name of the Village	Improved Breed (No.)			Milk production (liters)		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	5	3	7
	Polashganj (Bersiya)	1	0	12	2	5	17
	Mugalia Hat (Phanda)	3	0	5	4	6	12
<b>I</b>	<b>Adopted Village</b>	4	0	17	11	14	36
	Sonkatch (Bersiya)	0	0	0	0	0	0
	Kolukhedi (Bersiya)	6	7	23	6	24	43
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	3	0	3	9	24	74
<b>II</b>	<b>Cluster Villages</b>	9	7	26	15	48	117
	<b>Total All Villages</b>	13	7	43	26	62	153

Table No. 4.53 [Contd....]  
Live Stock and Dairying

Sl. No.	Name of the Village									
		Artificial insemination No. of animals			Improved feeding management			Vaccination No.		
		No. of respon- ding families	BT	AT	No. of respon- ding families	Yes	No	No. of respon- ding families	BT	AT
1	2	3	9	10	11	12	13	14	15	16
	Khajuri (Phanda)	5	0	1	5	5	0	5	0	5
	Polashganj (Bersiya)	0	0	0	2	2	0	0	0	0
	Mugalia Hat (Phanda)	3	0	5	3	3	0	3	0	7
I	<b>Adopted Village</b>	8	0	6	10	10	0	8	0	12
	Sonkatch (Bersiya)	0	0	0	0	0	0	0	0	0
	Kolukhedi (Bersiya)	6	0	16	6	6	0	6	10	23
	Kurana (Phanda)	0	0	0	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0	0	0	0
	Khamkheda (Phanda)	3	1	2	5	5	0	9	5	10
II	<b>Cluster Villages</b>	9	1	18	11	11	0	15	15	33
	<b>Total All Villages</b>	17	1	24	21	21	0	23	15	45

- 4.168 Ensuring the development of local pedigree animals and control the population of non-descript animals through **improved breeding practices** are a few of the initiatives taken by the State Government. However, the number of families involved in vocational training regarding improved breed is only 13 [4.48 percent to total number of 290 families] **that shows rather lack of interest of the participants. However, only 7 number of improved animals were there before training which increased to 43 number of animals after training which shows the positive impact though on limited scale.**
- 4.169 Regarding **milk production**, 26 number of families from five sample villages have attended the vocational training that comes to 8.97 percent to total number of sample families. In before training situation the total milk production of five reporting villages was 62 liters which increased 153 liters in after training situation. **Though the impact is there in limited sense but a continuous effort may lead to still better level of milk production.**
- 4.170 As regards artificial insemination 17 families [5.86 percent] from four villages have attended the training programme resulting in 24 number of animals inseminated in after training situation against one insemination in before training condition. The positive impact is thus visible.
- 4.171 Regarding improved feeding management, one of important ingredients of animal husbandry functions, 21 [7.24 percent] families from 4 villages have adopted such practices. **The situation, though is not very bright, but a continuous effort may lead to better conditions.**

4.172 Similarly for vaccination, 23 families [7.93 percent] from four villages have responded to the training programme getting 15 number of animals vaccinated during before training situation which increased to 45 in after training conditions that speaks of the impact of the training imparted by the K.V.K.

4.173 **In rural areas animal rearing activities are normally taken-up on small scale mainly because of the paucity of expert services and lack of road connectivity that deters the marketing of the product. Normally dairy farms are located close to urban areas, properly linked with the road network. For developing dairy activities in villages the first requirement, therefore, is the development of road connectivity, only then the dairying can be taken-up on viable scale for augmenting the income of the cultivators, which actually is the basic objective of the animal husbandry activities. Till then any effort of vocational training for animal husbandry and dairy will remain to be a matter of formality.**

#### VOCATIONAL TRAINING – POULTRY

4.174 The table below shows the details;

Table No. 4.54  
Poultry Farming

Sl. No.	Name of the Village						
		Improved Breed (No.)			Broilers (No.)		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0	0
	Mugalia Hat (Phanda)	1	0	1000	1	0	1000
<b>I</b>	<b>Adopted Village</b>	1	0	1000	1	0	1000
	Sonkatch (Bersiya)	0	0	0	0	0	0
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	0	0	0	0	0	0
<b>II</b>	<b>Cluster Villages</b>	0	0	0	0	0	0
	<b>Total All Villages</b>	1	0	1000	1	0	1000

Table No. 4.54 [Contd....]  
Poultry Farming

Sl. No.	Name of the Village										
		Improved caging system			Improved feed management			Vaccination No. of Birds			
		No. of responding families	Yes	No	No. of responding families	Yes	No	No. of responding families	BT	AT	
1	2	3	9	10	11	12	13	14	15	16	
	Khajuri (Phanda)	0	0	0	0	0	0	0	0	0	0
	Polashganj(Bersiya)	0	0	0	0	0	0	0	0	0	0
	Mugalia Hat (Phanda)	1	1	1	0	1	0	1	0	1000	
I	<b>Adopted Village</b>	1	1	1	1	1	0	1	0	1000	
	Sonkatch (Bersiya)	0	0	0	0	0	0	0	0	0	
	Kolukhedi(Bersiya)	0	0	0	0	0	0	0	0	0	
	Kurana (Phanda)	0	0	0	0	0	0	0	0	0	
	Ratatal (Phanda)	0	0	0	0	0	0	0	0	0	
	Ratibad (Phanda)	0	0	0	0	0	0	0	0	0	
	Khamkheda (Phanda)	0	0	0	0	0	0	0	0	0	
II	<b>Cluster Villages</b>	0	0	0	0	0	0	0	0	0	
	<b>Total All Villages</b>	1	1	1	1	1	0	1	0	1000	

4.175 Poultry again is an activity in rural areas which is undertaken on a very small scale which is evident from the fact that only one family each has taken part in various poultry related activities viz. improved breed, broiler rearing, improved caging system, improved feed management and vaccination of birds. Though 1000 number of improved poultry [breed wise] and the same number of broilers have been produced after attending the training, yet only one number of respondent in each parameter raises a question whether in Bhopal district the training programme for poultry development should at all be organized and instead the effort involved in such subject should be directed to the spheres of agronomy where more families participate. If at all poultry related training is to be organized an assessment of the number of trainees to attend the programme must be done beforehand so that the effort becomes meaningful.

4.176 Inland fisheries though is an integral component of rural development in Madhya Pradesh but in our sample area of study not a single family has taken vocational training in fishery activities, though it is possible that the fishing activities in a stray way are being pursued in our sample area. This is an activity where more number of persons should respond. The K.V.K. may make special efforts for popularizing the training on fishery activities along with State Government personnel.

## VOCATIONAL TRAINING – HOME SCIENCE

4.177 Vocational training in Home Science activities like toy making, preparation of pickles, bakery and jute items, preparation of papad/bari/jam/jelly etc. are important as usually the women and old people in rural areas get themselves engaged, that, besides, giving an income support, provide avenues of employment to rural population. The table below shows the details;

Table No. 4.55  
Home Science Activities

Sl. No.	Name of the Village	Toy making (No.)			Pickels (Kg.)		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	6	2	5
	Polashganj (Bersiya)	1	0	2	4	9	21
	Mugalia Hat (Phanda)	0	0	0	27	59	115
<b>I</b>	<b>Adopted Village</b>	1	0	2	37	70	141
	Sonkatch (Bersiya)	0	0	0	4	6	20
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	2	1	9
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	1	2	10
	Khamkheda (Phanda)	0	0	0	11	23	65
<b>II</b>	<b>Cluster Villages</b>	0	0	0	18	32	104
	<b>Total All Villages</b>	1	0	2	55	102	245

Table No. 4.55 [Contd...]  
Home Science Activities

Sl. No.	Name of the Village	Bakery (Kg.)			Papad/Badi/Jam/Jelly (Kg.)		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	2	0	2	5	2	6
	Polashganj (Bersiya)	0	0	0	1	0	4
	Mugalia Hat (Phanda)	16	54	110	21	3	88
<b>I</b>	<b>Adopted Village</b>	18	54	112	27	5	98
	Sonkatch (Bersiya)	2	0	5	2	0	9
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	2	8	2
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	1	0	1	1	0	5
	Khamkheda (Phanda)	1	0	2	9	8	27
<b>II</b>	<b>Cluster Villages</b>	4	2	8	14	8	43
	<b>Total All Villages</b>	22	56	120	41	13	141

4.178 Ever since the plastic toys have come in the rural markets, the indigenous art of making clay toys is getting extinct as is evident from the fact that only one family member from village Polashganj has taken training in toy making with no tangible output.

- 4.179 **Preparation of pickles**, of course, is an item getting popular in rural areas as the skill is already there being sharpened by the vocational training. Out of 290 sample families 55 households [18.97 percent to total sample households] have responded to the vocational training organized by the K.V.K. with production of 245 kg of pickles after getting the training as compared to 102 kg in before training situation.
- 4.180 In bakery items, which is supposed to be an urban activity, 22 households from 5 villages have taken part in vocational training resulting in production of bakery worth 120 kg. as against 56 kg in before training situation. **The gradual impact of intervention of K.V.K. is thus visible.**
- 4.181 Regarding **making of paper/badi etc.**, which is becoming a popular activity in rural areas mainly due to portability of the product in nearby market, 41 households [14.14 percent to total number of sample households] have responded to the training programme resulting in production of 141 kgs of product after getting training as against the production of 13 kg in before training situation. Such type of activities may be extensively popularized in rural areas as these functions have immense employment potential for augmenting family income.

#### VOCATIONAL TRAINING – TRAINING OF RURAL YOUTH

- 4.182 Training of rural youth for self employment is an integral part of rural development. Multiple of activities have been identified for imparting training. In our area of study placements have been recorded only in two trades viz. motor binding and tractor, diesel engine repair. The table below shows the details.

Table No. 4.56  
Training of Rural Youth

Sl. No.	Name of the Village	Placement, motor binding No. of beneficiaries			Placement, Tractor, diesel engine repairing		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	2	0	2	0	0	0
	Polashganj (Bersiya)	1	0	1	1	0	1
	Mugalia Hat (Phanda)	3	0	3	1	0	1
I	<b>Adopted Village</b>	4	0	6	2	0	2
	Sonkatch (Bersiya)	2	0	2	0	0	4
	Kolukhedi (Bersiya)	2	0	2	3	0	1
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	2	0	2	1	0	1
II	<b>Cluster Villages</b>	6	0	4	4	0	2
	<b>Total All Villages</b>	10	0	10	6	0	6

- 4.183 Regarding motor binding 10 respondents have been self employed while in case of engine repairs 6 persons got placement after receiving training. This is not a very mean achievement, as the trend will induce more number of rural youth to attend such training courses for rehabilitating themselves in life. Seemingly other trades like black smithy, carpentry, masonry are not popular as no rural youth has responded to such programmes.

## VOCATIONAL TRAINING – AGRO FORESTRY

4.184 Agro-forestry is the concept of eighties which guarantees farm income, covers the risk of crop failure, improves the soil fertility, its structure and texture and checks the soil erosion. The table below shows the details;

Table No. 4.57  
Agro Forestry – On Farm Plantation

Sl. No.	Name of the Village	On farm plantation (Hectare)		
		No. of responding families	BT	AT
1	2	3	4	5
	Khajuri (Phanda)	5	5	8
	Polashganj (Bersiya)	3	0	2
	Mugalia Hat (Phanda)	2	10	15
I	<b>Adopted Village</b>	10	15	25
	Sonkatch (Bersiya)	4	0	20
	Kolukhedi (Bersiya)	7	2	6
	Kurana (Phanda)	0	0	0
	Ratatal (Phanda)	0	0	0
	Ratibad (Phanda)	0	0	0
	Khamkheda (Phanda)	11	2	13
II	<b>Cluster Villages</b>	22	4	39
	<b>Total All Villages</b>	32	19	64

4.185 Out of total of 290 families, 32 number of households from six villages have responded to the vocational training programme organized by the K.V.K. which is 11.03 percent to the total of sample households. The area coverage before training was 19 hect that increased to 64 hect which reflects the impact of K.V.K. effort, though on limited scale. **More efforts are required to enhance the area under agro-forestry as the concept has immense advantages.**

## VOCATIONAL TRAINING – ORGANIC FARMING

4.186 The concept is yet to pick-up in our area of study as the response is nil to the various training programmes relating to organic farming. However, as on date the organic farming concept is followed either in government farms or by the big cultivators as the yield per hectare derived out of this practice is usually low which the small cultivators can not afford. However, efforts must be made to popularize the organic farming techniques as the product fetches more income.

## VOCATIONAL TRAINING – WATERSHED ACTIVITIES

4.187 Watershed activities are undertaken mainly to conserve rain water by evolving various check points to arrest the flow of water. In our area of study the response was only to construction of soak pits that collects the domestic waste water outside the residential building which have the various advantages from sanitation point of view and also raises the water table through percolation technique. The table below shows the details;

Table No. 4.58  
Watershed Activities – Soak Pits

Sl. No.	Name of the Village	Soak Pits Nos.		
		No. of responding families	BT	AT
1	2	3	4	5
	Khajuri (Phanda)	4	6	4
	Polashganj (Bersiya)	3	0	10
	Mugalia Hat (Phanda)	14	0	173
I	<b>Adopted Village</b>	21	6	227
	Sonkatch (Bersiya)	2	0	15
	Kolukhedi (Bersiya)	5	6	35
	Kurana (Phanda)	0	0	0
	Ratatal (Phanda)	0	0	0
	Ratibad (Phanda)	0	0	0
	Khamkheda (Phanda)	10	0	104
II	<b>Cluster Villages</b>	17	6	154
	<b>Total All Villages</b>	38	12	381

4.188 The above table shows that out of 290 sample families 38 number of households from six villages have responded that comes to 13.10 percent to the total number of sample families. **The number of soak pits constructed in before training situation is 12 which increased to 381 – a quantum jump, that speaks of the impact of K.V.K. intervention in creating awareness. The other items of watershed activities i.e. nallah bunding, construction of check dams and counter trenches are basically aimed at creating community assets which require the initiative of the government with public participation.**

4.189 In the following paragraphs an attempt has been made to sum-up the efforts of vocational training imparted by the K.V.K.

- **Regarding the yield per-hectare both for agronomical and horticultural crops the after training situation as compared to before training situation is better that clearly shows the positive impact of vocational training imparted by the K.V.K.**
- **In case of wheat crop where the response is 53.79 percent to total number of 290 sample households, the per-hectare yield is more than the district and State averages both in before training and after training situations.**
- **For paddy crop the percentage response is 3.10 with per-hectare yield less than district and State averages both in before training and after training situations. However, paddy being comparatively less important crop for district Bhopal, the lesser response seems obvious. However intensive efforts are required to enhance the productivity to bring it at par with at least the district average.**
- **Regarding maize crop where the participation is 13.79 percent to total number of sample households the per-hectare yield in after training conditions is better than district average and less than the State average.**
- **For gram crop the percentage participation is 35.17 with remarkable after training performance resulting in much higher productivity as compared to both district and State averages.**
- **Regarding arhar crop where the percentage participation is 10.34, the per hectare yield in after training scenario is better than both district and State averages.**



- Similarly for lentil crop the productivity in AT situations are higher than district and State level performances.
- Soybean being an important cash crop of Sehore district, 96.21 percent families have participated in the vocational training programmes. The per-hectare yield in after training status is higher than both district and State average.
- In case of mustard crop though the percentage response is only 7.24 but the after training performance is satisfactory because of higher per-hectare yield as compared to district and State averages. An intensive effort will perhaps enhance the participation rate.
- The important horticulture crops of the district are tomato, brinjal and bhindi wherein the participation rate is 10.69 percent, 11.24 percent and 7.25 percent respectively. In these crops the after training performances are better than before training situations. An intensive effort is, perhaps, required to persuade the cultivators to take-up cultivation of horticulture crops on affordable scale looking to the availability of market as these crops give income support to the families.
- Livestock and dairying where the participation rate that ranged between 4.48 percent for improved breeding practices to 8.97 percent for milk production, need some more effort to enhance the participation of the villagers as the live stock and dairy activities are important constituents of income augmentation.
- Poultry and fisheries are the areas where negligible or nil participation has been recorded. These are the activities which are pursued by the villagers on a limited scale that hardly induce them to attend any training programme whatsoever.
- For home science the important constituents are preparation of pickles, bakery items, making of papad/badi etc where though participation is limited but the things are picking-up that gives a promise of better performance.
- Similar is the case with training of rural youth wherein 10 and 6 persons respectively got placements in the trades like motor binding and engine repairs respectively. Though the performance is on limited scale, a better performance is expected provided the awareness campaigns are organized on more extensive scale.
- Agro-forestry is yet another field where 32 number of households from six villages have taken advantage of the vocational training programme.
- The concept of organic farming is yet to pick-up in our area of study as the response is nil to the various training programmes relating to organic farming.
- Regarding watershed activities, 38 number of households that comes to 13.10 percent to total number of sample households have participated in the training relating to construction of soak pits.

#### **FRONT LINE DEMONSTRATION – AGRONOMY CEREALS**

4.190 Front line demonstrations are organized on farmers field with the result the response is bound to be low as compared to vocational training. Normally the front line demonstrations are organized for such cultivators who have received the vocational training. The table below shows the impact of front line demonstrations on cereal crops.

Table No. 4.59  
Agronomy – Cereals

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Wheat			Paddy		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	3	1981	2121	0	0	0
	Polashganj (Bersiya)	6	1970	2012	0	0	0
	Mugalia Hat (Phanda)	13	1992	2115	0	0	0
I	<b>Adopted Village</b>	22			0		
	Sonkatch (Bersiya)	13	1915	2115	2	684	712
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	2	1928	2118	0	0	0
	Ratatal (Phanda)	2	1915	2111	0	0	0
	Ratibad (Phanda)	4	1968	2019	0	0	0
	Khamkheda (Phanda)	9	1970	2116	3	619	705
II	<b>Cluster Villages</b>	30			5		
	<b>Total All Villages</b>	52			5		

Table No. 4.59 [contd...]  
Agronomy – Cereals

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Maize			Jowar		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	1	1500	2200	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0	0
	Mugalia Hat (Phanda)	3	1478	1501	0	0	0
I	<b>Adopted Village</b>	4					
	Sonkatch (Bersiya)	3	1311	1415	2	0	1205
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	6	1401	1425	0	0	0
II	<b>Cluster Villages</b>	9			2		
	<b>Total All Villages</b>	13			2		

4.191 The front line demonstrations for the **wheat crop** have been organized on the fields of 52 farmers. In before training situations the per hectare yield of wheat ranged between 1928 kg for village Kurana [cluster village] to 1992 kg for village Mugalia Hat [adopted village] **which are higher than the per hectare yield levels of district Bhopal [1837 kg] and state [1867 kg]**. In after training situations, for every reporting village the yield rate is higher than before training conditions.

- 4.192 **Regarding paddy**, a total number of 5 demonstrations have been organized in two cluster villages. The productivity in after training situation is better than that of before training status though the productivity is less than the district and State averages of 727 kg per hectare and 1058 kg. respectively. **Paddy being less important crop of Bhopal district, such results are expected.**
- 4.193 In case of maize crop 13 numbers of FLDs have been organized in 4 number of villages that resulted in better performance in after training situation where the yield rate varied between 1415 kg per hectare in case of village Sonkatch to 2200 kg in case of Khajuri, which are lower than district and State average figure of 1566 kg and 2072 kg respectively [except for village Khajuri].
- 4.194 Similarly for jowar crop 2 numbers of FLDs have been organized in one village. Since the crop is hardly of any importance to Bhopal district only after training result of 1200 kg have been recorded which is less than the district and State average figures of 1216 kg and 1342 kg respectively.

### AGRONOMY - PULSES

4.195 The table below shows the details;

Table No. 4.60  
Agronomy – Pulses

Sl. No.	Name of the Village	Yield per hectare – Kg		
		Gram		
		No. of responding families	BT	AT
1	2	3	4	5
	Khajuri (Phanda)	5	1300	1400
	Polashganj (Bersiya)	2	1200	1350
	Mugalia Hat (Phanda)	6	1100	1275
I	<b>Adopted Village</b>	13		
	Sonkatch (Bersiya)	9	1106	1215
	Kolukhedhi (Bersiya)	7	1105	1216
	Kurana (Phanda)	3	1110	1213
	Ratatal (Phanda)	1	1400	1800
	Ratibad (Phanda)	2	1105	1910
	Khamkheda (Phanda)	5	1107	1400
II	<b>Cluster Villages</b>	27		
	<b>Total All Villages</b>	40		

Table No. 4.60 [Contd...]  
Agronomy – Pulses

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Arhar			Lentil		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	1	1000	1200	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0	0
	Mugalia Hat (Phanda)	1	979	1150	3	1100	1175
I	<b>Adopted Village</b>	2			3		
	Sonkatch (Bersiya)	4	978	1151	0	0	0
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	3	890	1000	0	0	0
II	<b>Cluster Villages</b>	7			0		
	<b>Total All Villages</b>	9			3		

4.196 **Gram being** one of the important crops of Bhopal district, 40 number of front line demonstration [F.L.Ds.] were organized in all the 9 number of villages resulting in per-hectare yield ranging between 1004 kg in village Mugalia Hat [adopted village] to 1300 kg in village Khajuri [adopted village] which are more than district and State averages of 1002 kg and 825 kg respectively in BT situations. In AT situations the per-hectare yield for all the villages is more than the BT situation that ranged between 1213 kg in case of village Kurana to [cluster village] to 1910 kg for village Ratibad [cluster village] with obvious advantage over district and State averages. **The satisfactory performance in cluster villages is indicative of the fact that the positive results of the FLD have percolated to cluster group of villages through various forward linkages.**

4.197 **In case of Arhar**, 9 number of FLDs have been organized in four villages resulting in crop productivity which is higher in AT situations for all the villages indicating the positive impact of K.V.K's effort. The yield per-hectare both in BT and AT situations is higher than the district average of 550 kg and state average of 825 kg which again is an indication of better performance.

4.198 **Regarding Lentil**, 3 number of FLDs have been organized in village Mugalia Hat [adopted village] resulting in yield which is more than district average of 484 kg [the state average figure is not available] both in BT and AT situations.

## FLD – AGRONOMY – OIL SEEDS

4.199 The table below shows the details;

Table No. 4.61  
Agronomy – Oil Seeds

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Soybean			Mustard		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	5	1000	1100	0	0	0
	Polashganj (Bersiya)	7	1325	1635	1	0	916
	Mugalia Hat (Phanda)	19	1000	1115	3	700	890
I	<b>Adopted Village</b>	31			4		
	Sonkatch (Bersiya)	16	1005	1125	2	0	827
	Kolukhedi (Bersiya)	6	1005	1125	0	0	0
	Kurana (Phanda)	1	1006	1126	0	0	0
	Ratatal (Phanda)	5	1009	1125	0	0	0
	Ratibad (Phanda)	4	1110	1139	0	0	0
	Khamkheda(Phanda)	27	1115	1171	1	0	829
II	<b>Cluster Villages</b>	59			3		
	<b>Total All Villages</b>	90			7		

4.200 Soybean being important crop of Bhopal district, the number of FLDs organized are 90 for all the nine number of sample villages resulting in yield rate that ranged between 1000 kg for village Khajuri [adopted village] to 1335 kg for village Polashganj [adopted village] in BT situations which is lower than district and state averages of 1076 kg and 1132 kg respectively for most of the villages, while in AT situation the yield per hectare [higher than BT situations for all the villages] ranged between 1100 kg for Khajuri [adopted village] to 1171 kg for village Khamkheda [cluster village] which are higher than district level per hectare yield. The performance of the K.V.K. in positive manner is obvious.

4.201 **Regarding Mustard**, 7 number of FLDs have been organized in four number of villages resulting in productivity that ranged between 827 kg for village Sonkatch [Cluster village] to 916 kg for Polashganj [adopted village] in after training situations which is more than the district average of 818 kg and less than state average of 1009 kg.

4.202 **No FLDs have been organized for cotton, sugarcane, linseed which are not important crops of Bhopal district.**

## FLD – HORTICULTURE

4.203 The table below shows the details;

Table No. 4.62  
Horticulture

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Potato			Onion		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	3	100	201	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0	0
	Mugalia Hat (Phanda)	1	105	178	2	100	118
<b>I</b>	<b>Adopted Village</b>	4			2		
	Sonkatch (Bersiya)	0	0	0	0	0	0
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	3	108	158	2	97	105
<b>II</b>	<b>Cluster Villages</b>	3			2		
	<b>Total All Villages</b>	7			4		

Table No. 4.62 [Contd...]  
Horticulture

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Tomato			Brinjal		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	4	100	205	5	155	236
	Polashganj (Bersiya)	1	120	190	2	150	201
	Mugalia Hat (Phanda)	5	100	140	3	110	475
<b>I</b>	<b>Adopted Village</b>	9			10		
	Sonkatch (Bersiya)	0	0	0	1	180	200
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	2	125	201
	Ratatal (Phanda)	2	110	145	1	125	211
	Ratibad (Phanda)	2	115	155	0	0	0
	Khamkheda (Phanda)	4	121	161	6	126	181
<b>II</b>	<b>Cluster Villages</b>	8			10		
	<b>Total All Villages</b>	17			20		

Table No. 4.62[Contd...]  
Horticulture

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Chilli			Bhindi		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	1	70	110
	Polashganj (Bersiya)	0	0	0	0	0	0
	Mugalia Hat (Phanda)	3	100	125	4	92	100
I	<b>Adopted Village</b>	3			5		
	Sonkatch (Bersiya)	1	190	230	1	75	102
	Kolukhedi (Bersiya)	0	0	0	0	0	0
	Kurana (Phanda)	1	150	210	1	95	130
	Ratatal (Phanda)	1	200	250	0	0	0
	Ratibad (Phanda)	0	0	0	1	78	102
	Khamkheda (Phanda)	1	98	119	1	71	125
II	<b>Cluster Villages</b>	4			4		
	<b>Total All Villages</b>	7			9		

- 4.204 Potato being a common crop of the district, 7 number of FLDs have been organized in four sample villages with the yield rates in AT situations far exceeding the BT situations with yield rates above the district average of 115 quintal and State average of 119 quintal per hectare.
- 4.205 Similarly for onion crop four number of FLDs have been organized in two villages wherein the yield rates in AT conditions are more than BT conditions. The yield per hectare is more than the district average of 96 quintal for both BT and AT situations but less than the state average of 119 quintal for both BT and at conditions.
- 4.206 Tomato is one of the horticultural crops which is picking up in Bhopal district as is evident from the fact that 17 number of FLDs have been organized with substantial yield rates particularly in AT situations. As the information regarding district and state average is not available, a comparison, therefore is not possible.
- 4.207 Similar is the case with Brinjal crop wherein 20 number of FLDs have been organized in 7 number of villages with satisfactory yield rates in AT situations that ranged between 181 quintal per hectare in village Khamkheda [cluster village] to 236 quintal in village Khajuri [adopted village]. Here again due to non-availability of district and State average information a comparison is not possible.
- 4.208 Regarding Chilly crop 7 number of FLDs have been organized in 5 sample villages leading to a substantial yield rate particularly in AT situations leading to a visible positive impact of K.V.K. efforts. The non-availability of district and state average figures are constraint, hindering any sort of comparison with the results of sample villages.
- 4.209 Similarly for Bhindi crop 9 number of FLDs have been organized in six number of villages with AT situations brighter than BT. Again due to non-availability of information regarding district and state averages a comparison with the results of sample villages is not possible.

4.210 For crops like cucurbits, spices, mango, banana, papaya, citrus, no FLD has been organized.

#### FRONT LINE DEMONSTRATION – LIVESTOCK AND DAIRYING

No FLDs have been organised on any of the subjects of livestock and dairying.

#### POULTRY

4.211 Similarly no FLDs have been organised on any of the subjects of poultry.

#### FISHERIES

4.212 Fisheries is yet another field where no FLD has been organised.

#### FRONT LINE DEMONSTRATION – HOME SCIENCE

4.213 The table below shows the details;

Table No. 4.63  
Home Science

Sl. No.	Name of the Village	Pickles, kg		
		No. of responding families	BT	AT
1	2	3	4	5
	Khajuri (Phanda)	0	0	0
	Polashganj (Bersiya)	0	0	0
	Mugalia Hat (Phanda)	0	0	0
I	<b>Adopted Village</b>	0		
	Sonkatch (Bersiya)	2	0	28
	Kolukhedi (Bersiya)	0	0	0
	Kurana (Phanda)	00	0	0
	Ratatal (Phanda)	0	0	0
	Ratibad (Phanda)	0	0	0
	Khamkheda (Phanda)	0	0	0
II	<b>Cluster Viilages</b>	2		28
	<b>Total All Villages</b>	2		28

4.214 Only for Pickles 2 number of FLDs have been organised in village Sonkatch [cluster village] resulting in the production of 28 kgs of pickles mostly for domestic consumption. For items like toy making, bakery, jute items, papad/bari etc. no FLD has been organised.

#### FRONT LINE DEMONSTRATION – AGRO FORESTRY

4.215 The table below shows the details;



Table No. 4.64  
Agro Forestry

Sl. No.	Name of the Village	On farm Plantation Hectare		
		No. of respondents	BT	AT
		3	4	5
	Khajuri (Phanda)	3	2	5
	Polashganj (Bersiya)	2	0	1
	Mugalia Hat (Phanda)	2	0	1
I	<b>Adopted Village</b>	7	2	8
	Sonkatch (Bersiya)	3	0	3
	Kolukhedi (Bersiya)	3	0	10
	Kurana (Phanda)	0	0	0
	Ratatal (Phanda)	0	0	0
	Ratibad (Phanda)	0	0	0
	Khamkheda (Phanda)	8	0	12
II	<b>Cluster Viilages</b>	14	0	25
	<b>Total All Villages</b>	21	2	33

4.216 Agro-forestry is the field which is becoming popular in Bhopal district because of its many advantages which is evident from the fact that 21 FLDs have been organised in 6 villages with 2 hectare coverage in BT situation that enhanced to 33 hectares in after training situation.

## ORGANIC FARMING

4.217 Organic Farming is again an area where no FLD has been organised.

## FRONT LINE DEMONSTRATION – WATERSHED ACTIVITIES

Table No. 4.65  
Watershed Activities

Sl. No.	Name of the Village	Soak Pits Nos.		
		No. of respondents	BT	AT
1	2	3	4	5
	Khajuri (Phanda)	2	5	30
	Polashganj (Bersiya)	0	0	0
	Mugalia Hat (Phanda)	0	0	0
I	<b>Adopted Village</b>	2	5	30
	Sonkatch (Bersiya)	0	0	0
	Kolukhedi (Bersiya)	0	0	0
	Kurana (Phanda)	0	0	0
	Ratatal (Phanda)	0	0	0
	Ratibad (Phanda)	0	0	0
	Khamkheda (Phanda)	0	0	0
II	<b>Cluster Viilages</b>	0	0	0
	<b>Total All Villages</b>	2	5	30

4.218 Only on subject of construction of soak pits 2 number of FLDs have been organised resulting in construction of 5 number of soak pits in BT situation which enhanced to 30 soak pit in AT conditions. **On subjects like Nallah Bunding, Check Dams, Counter Trenches, Farm Ponds and Self Help Groups no FLD has been organised.**

#### 4.219 To sum-up

- **Front Line Demonstrations organised in our area of study has led to enhanced productivity in most of the agriculture and horticulture crops in AT situations as compared to BT situations which is a positive impact of the efforts of Bhopal KVK.**
- **In cluster group of villages the performance is as good as adopted villages that shows the efforts of agriculture scientists have percolated to such villages through various forward linkages.**
- **In case of wheat crop 52 number of FLDs have been organised that lead to the yield rates higher than district and State averages both in before and after training situations.**
- **In case of paddy, maize and jowar crops though the number FLDs organised are 5,13 and 2 respectively but yield per hectare is less than the district and State averages. These crops though are not important for district Bhopal but an intensive effort for paddy crop may be made as this crop has ready market.**
- **Gram being one of the important crops of Bhopal district 40 number of FLDs have been organised with yield per hectare higher than both in BT and AT conditions as compared to district and state averages.**
- **In case of Arhar, 9 number of FLDs have been organised resulting in higher per hectare yield as compared to district and State averages both in BT and AT situations.**
- **Regarding lentil 3 number of FLDs have been organised that lead to higher yield per hectare as compared to district average both in BT and AT situations.**
- **Soybean being an important crop of Bhopal district 90 number of FLDs have been organised that lead to higher yield rate as compared to district average but lower to the state average figure of 1132 kg [except for village Khamkhedi].**
- **Regarding Mustard crop 7 number of FLDs have been organised resulting in higher yield as compared to district average but less than State average in AT situations.**
- **In case of Potato, 7 number of FLDs have been organised with yield rate far exceeding as compared to district and State averages in AT situations.**

#### ON FARM TESTING

4.220 In case of On Farm Testing new technologies are tested on farmer's fields leading to the solution of group of farming problems. The extent of response is bound to be low as the new technologies are not frequent. Normally the participants of this activity are from the farmers on whose fields front line demonstration have been organised.

4.221 The table below shows the details;

Table No. 4.66  
Cereal Crops

Sl. No.	Name of the Village	Yield Per – Hectare – Kg								
		Wheat			Maize			Jowar		
		No. of responding families	BT	AT	No. of responding families	BT	AT	No. of responding families	BT	AT
	Khajuri (Phanda)	0	0	0	0	0	0	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0	0	0	0	0
	Mugalia Hat Phanda)	4	1991	2012	0	0	0	1	500	800
I	<b>Adopted Village</b>	4			0			1		
	Sonkatch (Bersiya)	1	1960	1975	0	0	0	0	0	0
	Kolukhedi (Bersiya)	6	1911	1975	0	0	0	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0	0	0	0
	Ratatal (Phanda)	2	1915	1995	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0	0	0	0
	Khamkheda(Phanda )	1	1901	1990	1	1100	1201	0	0	0
II	<b>Cluster Villages</b>	10			1			0		
	<b>Total All Villages</b>	14			1			1		

4.222 In case of Wheat, 14 number of on farm testing activities have been organised in 5 number of villages leading to the crop yield per hectare that ranged between 1901 kg in case of village Khamkheda [cluster village] to 1971 kg in case of village Mugalia Hat [adopted village] in BT situations, registering yield rates, higher than district average of 1837 kg and State average of 1867 kg. **In AT situations the per-hectare yield for every village is higher than the BT situations that ranged between 1975 kg for village Kolukhedi [cluster village] to 2012 kg in case of village Mugalia Hat [adopted village]. Obviously the yield rates are much higher than both district and state averages.**

4.223 For Maize crop only one member of on farm testing has been organised in village Khamkheda [cluster village] leading to yield per-hectare of 1100 kg and 1201 kg in BT and AT situations respectively which are less than district average of 1566 kg and state average of 2072 kg per hectare.

4.224 Similarly for Jowar one number of on farm testing was organised for village Mugalia Hat [Adopted village] leading to the yield rates which are lower than district and state averages of 1216 kg and 1342 kg respectively both in BT and AT situations.

#### **ON FARM TESTING – PULSES CROP**

4.225 The table below shows the details;

Table No. 4.67  
Pulses Crop

Sl. No.	Name of the Village	Yield Per – Hectare – Kg					
		Gram			Arhar		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	1	1000	1600
	Polashganj (Bersiya)	1	1400	1900	0	0	0
	Mugalia Hat (Phanda)	2	1003	1500	0	0	0
I	<b>Adopted Village</b>	3			1		
	Sonkatch (Bersiya)	1	800	1200	0	0	0
	Kolukhedi (Bersiya)	5	715	1110	0	0	0
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	1	800	1400	0	0	0
II	<b>Cluster Villages</b>	7			0		
	<b>Total All Villages</b>	10			1		

4.226 Gram being one of the important crops of Bhopal district, **10 numbers of on farm testing have been organised in 5 number of villages with yield rate in AT conditions more than BT situations for every village that ranged between 1110 kg in case of village Kilukhedi [cluster villages] to 1900 kg in case of Polashganj [adopted village] registering a higher yield per hectare of district average of 1002 kg and state average of 932 kg.**

4.227 In case of Arhar, **one number** of on farm testing has been organised for village Khajuri [adopted village] wherein the per-hectare yield in both BT and AT conditions is far more than district average of 550 kg and State average of 825 kg.

#### **ON FARM TESTING – OIL SEED CORPS**

4.228 The table below shows the details;

Table No. 4.68  
Oil Seed Crop

Sl. No.	Name of the Village	Yield Per – Hectare – Kg		
		Soybean		
		No. of respondents	BT	AT
1	2	3	4	5
	Khajuri (Phanda)	1	1110	1193
	Polashganj (Bersiya)	1	1300	1400
	Mugalia Hat (Phanda)	1	1115	1190
I	<b>Adopted Village</b>	3		
	Sonkatch (Bersiya)	1	900	1138
	Kolukhedi (Bersiya)	11	1000	1171
	Kurana (Phanda)	0	0	0
	Ratatal (Phanda)	1	1050	1193
	Ratibad (Phanda)	1	1011	1250
	Khamkheda (Phanda)	3	1050	1260
II	<b>Cluster Villages</b>	17		
	<b>Total All Villages</b>	20		

4.229 Soybean again being one of the important crops of Bhopal district **20 numbers** of on farm testing activities have been organised in 8 number of villages resulting in enhanced yield rates for all the reporting villages in AT conditions as compared to BT situations which are higher than district and State averages of 1076 kg and 1132 kg respectively.

4.230 **For crops like paddy, lentil, mustard, cotton, sugarcane, linseed no on farm testings have been organised being less important crops of the district.**

#### ON FARM TESTING – HORTICULTURE CROPS

4.231 The following table shows the details

Table No. 4.69  
On Farm Testing

Sl. No.	Name of the Village	Yield Per – Hectare – Quintal								
		Potato			Tomato			Brinjal		
		No. of responding families	BT	AT	No. of responding families	BT	AT	No. of responding families	BT	AT
	Khajuri (Phanda)	0	0	0	0	0	0	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0	0	0	0	0
	Mugalia Hat (Phanda)	0	0	0	0	0	0	1	160	250
I	<b>Adopted Village</b>	0			0			1	160	190
	Sonkatch (Bersiya)	0	0	0	0	0	0	0	0	0
	Kolukhedi -Bersiya	0	0	0	1	103	125	1	115	130
	Kurana (Phanda)	0	0	0	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0	0	0	0
	Khamkheda (Phanda)	1	110	157	1	127	157	1	120	135
II	<b>Cluster Villages</b>	1			2			2		
	<b>Total All Villages</b>	1			2			3		

Table No. 4.69[Contd...]  
On Farm Testing

Sl. No.	Name of the Village	Yield Per – Hectare – Quintal					
		Chilly			Mango		
		No. of responding families	BT	AT	No. of responding families	BT	AT
1	2	3	4	5	6	7	8
	Khajuri (Phanda)	0	0	0	0	0	0
	Polashganj (Bersiya)	0	0	0	0	0	0
	Mugalia Hat (Phanda)	0	0	0	0	0	0
<b>I</b>	<b>Adopted Village</b>	0			0		
	Sonkatch (Bersiya)	0	0	0	0	0	0
	Kolukhedi (Bersiya)	0	0	0	1	7	10
	Kurana (Phanda)	0	0	0	0	0	0
	Ratatal (Phanda)	0	0	0	0	0	0
	Ratibad (Phanda)	0	0	0	0	0	0
	Khamkheda (Phanda)	1	100	120	0	0	0
<b>II</b>	<b>Cluster Villages</b>	1			1		
	<b>Total All Villages</b>	1			1		

- 4.232 In case of potato only one on-farm testing activity has been organised for village Khamkheda [cluster village] with AT situation better than BT conditions with yield rate more than district average of 115 quintal per hectare and state average of 119 quintal per hectare.
- 4.233 For tomato which is a popular horticulture crop of the district, **two** numbers of on farm testings have been organised for villages Kolukhedi and Khamkheda [both cluster villages] wherein the per hectare yield is better in AT situations as compared to BT situations.
- 4.234 Similarly for brinjal **3 numbers** of on farm testings have been organised in 3 villages with better crop yield in AT situation as compared to BT.
- 4.235 For Chilly crop one number of on farm testing has been organised for village Khamkheda [cluster village] with better performance in AT situations that BT conditions.
- 4.236 As regards Mango crop one number of on farm testing has been organised for village Kolukhedi [cluster village] with better performance in AT situation than BT.
- 4.237 **For horticultural crops like onion, bhindi, cuccherbits, spices, banana, papaya and citrus no on farm testings have been organised.**
- 4.238 **On activities like livestock and dairying, poultry, fisheries development, home science, organic farming and watershed activities, no on farm testings have been organised.**

#### ON FARM TESTING – AGRO FORESTRY

- 4.239 The following table shows the details;

Table No. 4.70  
Agro Forestry

Sl. No.	Name of the Village	On Farm Plantation Hectare		
		No. of respondents	BT	AT
1	2	3	4	5
	Khajuri (Phanda)	0	0	0
	Polashganj (Bersiya)	0	0	0
	Mugalia Hat (Phanda)	0	0	0
I	<b>Adopted Village</b>	0		
	Sonkatch (Bersiya)	0	0	0
	Kolukhedi (Bersiya)	0	0	0
	Kurana (Phanda)	0	0	0
	Ratatal (Phanda)	0	0	0
	Ratibad (Phanda)	0	0	0
	Khamkheda (Phanda)	2	0	3
II	<b>Cluster Villages</b>	2		
	<b>Total All Villages</b>	2		

4.240 Regarding on farm plantation, only two numbers of on farm testings have been conducted for village Khamkheda [cluster village] with 3 hectare coverage in AT situation.

4.241 In the following paragraph **summing – up** effort has been made for the results of on farm testing.

- **For every parameter the performance in after training situations is better than before training conditions that shows the positive impact of KVK efforts both in case of adopted and cluster group of villages.**
- **Major number of on farm testing activities have organised in case of crops like wheat [14 numbers], gram [10 numbers] soybean [20 numbers] tomato [2numbers] brinjal [3 numbers] agro forestry [2 numbers] which are important crops/activity of Bhopal district.**
- **Complete vaccum in the fields of livestock and dairying, home science and watershed activities are matters of concern. May be more intensive efforts are required to boost-up such activities as these functions are important to the rural economy.**
- **The foregoing paragraphs have given a clear picture of the impact of the efforts of the KVK in case of various mandates laid down for them in fields of vocational training, front line demonstration and on farm testing. It has come out very clearly that in only limited number of subjects the response is substantial or satisfactory. For example in case of crops like wheat, gram, soybean potato and tomato are important from participation point of view. Livestock and dairying, agro-forestry and watershed are the subjects [beyond crop production] where the participation rate is satisfactory. Fields like training for rural youth fishery, poultry and organic farming where the participation is either negligible or nil. It is now a matter of consideration whether the limited resources of the KVK is to be concentrated over the subjects of higher participation or induced to be applied over every parameter that might lead to low key results. The matter will be dealt in detail in recommendation part.**

## STATUS OF ACTIVITIES IN CONTROL VILLAGE – MANIKHEDI KOT

- 4.242 In the foregoing paragraphs an attempt has been made to show the impact of the functions of KVK over adopted and cluster group of villages where there is direct intervention of KVK.
- 4.243 The study has identified one control village i.e. Manikhedi Kot with 15 sample household and 90 sample family members where there is no intervention of the KVK, considering similar subjects as taken for adopted and cluster villages to show the comparative status in areas of intervention and non-intervention. However, in case of control villages, before and after training situations have not been shown since there is no effort of KVK in this village. **For comparison the average performance of vocational training in after training situation has been taken as the participation regarding all subjects is maximum in case of vocational training.**

## CONTROL VILLAGE – MANIKHEDI KOT – CEREALS

- 4.244 In Case of **wheat crop** the per hectare yield is 1971 kg which though close to BT situation but definitely less than AT situation where the average yield for both adopted and cluster village is 2076 kg per hectare.
- 4.245 Regarding **Paddy crop** again the yield rate of 576 kg per hectare for control village is below the average yield of 700 kg for AT situations for adopted and cluster villages.
- 4.246 Similarly for **Maize crop** the yield per hectare that stands at 1429 kg for control village is less than the average yield of 1975 kg per hectare in AT situation both for adopted and cluster villages.
- 4.247 Regarding **Jowar crop**, per hectare yield being 596 kg for control village is again less than the average per hectare yield of 1002 kg in AT situations for adopted and cluster villages.

## CONTROL VILLAGE – MANIKHEDIKOT – PULSES

- 4.248 **Gram** being one of the important crops of Bhopal district, the per hectare yield for control village is 1059 kg which again is lower than the average per hectare yield of 1252 kg for adopted and cluster villages in AT situations.
- 4.249 Similarly for **Arhar crop** the per hectare yield being 1115 kg for control village is again less than the average per hectare yield of 1455 kg in AT situations for both adopted and cluster villages.
- 4.250 Regarding the lentil crop the per hectare yield is 811 kg for control village which is less than the average yield of 1003 kg in AT situations for both adopted and cluster villages.

## CONTROL VILLAGE – MANIKHEDI KOT – OIL SEEDS

- 4.251 **Soybean** being important crop of Bhopal district the per hectare yield of the crop is 1127 kg for control village which is lower than the average per hectare yield of 1156 kg in AT situations for both adopted and cluster villages.
- 4.252 Regarding **Mustard** the per hectare yield is 857 kg for control village which is less than the average per hectare yield of 1216 kg in AT situations for both adopted and cluster villages.



- 4.253 **Linseed** is the crop where though no participation has been recorded for adopted and cluster villages, but in control village 3 numbers of sample families have reported to be cultivating the linseed with average yield per hectare of 457 kg.

#### **CONTROL VILLAGE – MANIKHEDIKOT – HORTICULTURE CROPS**

- 4.254 In Case of **Tomato** only one sample household is reported to be cultivating with per hectare yield of 100 quintal which is far less than 181 quintals for adopted and cluster villages in AT situations.
- 4.255 **Similarly for Brinjal, Chilly and Bhindi crops** the per hectare yield is 100 quintal, 160 quintal and 50 quintal respectively for control village which are less than the average per hectare yield of 197 quintal 201 quintal and 113 quintal respectively for adopted and cluster villages in AT situations.
- 4.256 **The conclusion that can be drawn from the above narration is that regarding agriculture and horticulture crop productivity the performance of adopted and cluster villages where there is intervention of the KVK is better than the performance of control village that shows the positive impact of KVKs over the crop production. The yield per hectare for most of the crops of control village is close to the yield rates prevailing in adopted and cluster villages in BT situations.**
- 4.257 **Regarding horticulture crops it may be seen that against the production of three crops viz. Tomato, Brinjal and Chilly in control village the extent of adaptability of such crops is much higher in both adopted and cluster villages where 10 number of horticulture crops viz. Potato, Onion, Tomato, Brinjal, Chilly, Bhindi, Cucurbits, Mango, Papaya and Citrus are grown that shows the efforts of KVK have borne fruit in getting diversification of crop production from traditional crops.**

#### **CONTROL VILLAGE – MANIKHEDI KOT – LIVESTOCK AND DAIRYING**

- 4.258 In case of improved breeding practices the per-family production of improved breed is one number of animal for control village against the per-family production of 3 animals of improved category for adopted and control village in AT situations. Though the difference is not much but the impact of KVK, however, is visible.
- 4.259 In case of milk production the per-family production for control village is 6 lit. whereas in case of adopted and control village the per-family production is again 6 liters in AT situations. An equal level of performance is possible as in control village there are farmers of resource who can afford a better milk yield.
- 4.260 In case of artificial insemination, the level of performance is again equal i.e. per-family one number of animal artificially inseminated for both control village and adopted and cluster villages in AT situations.
- 4.261 Similarly the level of improved feeding management is similar for both control, adopted and cluster group of villages where in per-family number of improved management is one number.
- 4.262 **As said earlier, since in villages the animal rearing is done mostly for self consumption, the villagers are not keen in adopting improved technology for animal rearing.**

4.263 **In case of poultry and fisheries the reaction of the villagers in adopting improved technology is nil in case of control village which is similar to adopted and cluster villages.**

#### **CONTROL VILLAGE- MANIKHEDIKOT – HOME SCIENCE**

4.264 In case of toy making and preparation of pickles wherein per-family making of toy and production of pickles are 5 number and 2.55 kg respectively in case of control village and 2 number and 4.45 kg respectively for both adopted and cluster village in AT situations is hardly meaningful.

4.265 **There is absolutely no response of the farmers for activities like training of rural youth, organic farming and watershed activities.**

#### **CONTROL VILLAGE MANIKHEDA KOT – AGRO FORESTRY**

4.266 The per-family coverage of the area under on farm plantation in case of control village is 1.33 hectare as against the figure of 2 hectares for adopted and cluster villages in AT situations. Though the difference is not much but one satisfactory fact is that the farmers have started understanding the value of agro-forestry.

4.267 In what follows an attempt has been made to **sum-up the** findings of control village

- **The information for the control village where there is no intervention of KVK has been collected to compare its performance with adopted and cluster villages in AT situations to show the impact of the efforts of KVK.**
- **It has been observed that in case of all agronomical and horticulture crops about which cultivation has been recorded in control village, the yield per hectare is lower as compared to adopted and cluster villages in AT situations that shows the positive effects of the efforts of KVK towards popularizing various technologies relating to crop production.**
- **The efforts of the KVK in popularizing the horticulture crop is apparent as 10 number of such crops viz. Potato, Onion, Tomato, Brinjal, Chilly, Bhindi, Cucurbits, Mango, Papaya and Citrus are presently cultivated in our sample adopted and cluster villages against only three number of crops viz. Tomato, Brinjal and Chilly being cultivated in control village.**
- **In case of livestock and dairying, home science and agro forestry the participation of the villagers is nominal leading to production which is not much meaningful.**
- **The activities like poultry, fisheries, training of rural youth organic farming and watershed the response of the sample families in control village is nil.**

#### **RESULTS OF SURVEY – INDIVIDUAL PARTICULARS – ADOPTED AND CLUSTER VILLAGES**

4.268 In the ensuing paragraphs an attempt has been made to narrate the reactions of the 25 percent of individuals taken from the sample family members. The total number of sample family members as reported in the foregoing paragraphs is 1921 for adopted, cluster and control villages, the 25 percent of which comes 480 individuals. The following table gives the break up;

Table No. 4.71  
Basic Details

	Item	Total number of family members of 25 percent of households	25 percent of individuals taken from 25 percent of households
a	Adopted villages	761	188
b	Cluster villages	1070	269
c	Control village	90	23
	<b>Total</b>	<b>1921</b>	<b>480</b>

4.269 Though the 25 percent of 761 and 1070 comes to 190 and 267 respectively but we have taken the figures of 188 and 269 because of certain demographic particulars. However, a figure or two plus or minus is hardly meaningful so long it does not vitiate the survey results.

4.270 In the following paragraphs an attempt has been made to highlight the individual reactions of adopted and cluster villages i.e. for 457 individuals.

The criteria for selection of individuals are as follows;

- The individual should be adult member of the family.
- He should be associated with any programme of KVK. For individuals of control village, this criterion is not necessary.
- He should be literate, may be without having any formal education.

## SOCIAL CLASSIFICATION OF INDIVIDUALS

4.271 The table below shows the details;

Table No. 4.72  
Social Classification

S. No.	Name of the Village	No. of Individual	Social classification			
			S.T.	S.C.	O.B.C.	GENERAL
1	2	3	4	5	6	7
1.	Khajuri (Phanda)	52	5	0	6	41
2.	Polashganj (Bersiya)	20	0	0	20	0
3.	Mugalia Hat (Phanda)	116	0	10	101	5
	<b>Adopted Village</b>	188	5	10	127	46
4.	Sonkatch (Bersiya)	42	0	11	29	2
5.	Kolukhedi (Bersiya)	32	0	5	27	0
6.	Kurana (Phanda)	55	0	0	55	0
7.	Ratatal (Phanda)	45	0	4	41	0
8.	Ratibad (Phanda)	18	0	0	16	2
9.	Khamkheda (Phanda)	77	0	0	65	12
	<b>Cluster Village</b>	269	0	20	233	16
	<b>Total</b>	457	5	30	360	62

The above table shows that the bulk of 360 individuals are from OBC group that accounts for 78.77 percent to total number of 457 individuals from adopted and cluster villages. The combined percentage of ST and SC is 7.66 while the general category forms 13.57 percent.

## INDIVIDUALS CLASSIFIED ON THE BASIS OF RELIGION

4.272 The following table gives the details;

Table No. 4.73  
Classification on the Basis of Religion

S. No.	Name of the Village	No. of Individual	Religion code					
			Hindu	Muslim	Sikh	Christen	Naua-budh	Others
1	2	3	4	5	6	7	8	9
1.	Khajuri (Phanda)	52	47	5	0	0	0	0
2.	Polashganj (Bersiya)	20	20	0	0	0	0	0
3.	Mugalia Hat (Phanda)	116	116	0	0	0	0	0
	<b>Adopted Village</b>	188	183	5	0	0	0	0
4.	Sonkatch (Bersiya)	42	42	0	0	0	0	0
5.	Kolukhedi (Bersiya)	32	32	0	0	0	0	0
6.	Kurana (Phanda)	55	55	0	0	0	0	0
7.	Ratatal (Phanda)	45	45	0	0	0	0	0
8.	Ratibad (Phanda)	18	18	0	0	0	0	0
9.	Khamkheda (Phanda)	77	77	0	0	0	0	0
	<b>Cluster Village</b>	269	269	0	0	0	0	0
	<b>Total</b>	457	452	5	0	0	0	0

4.273 The above table shows that 98.91 percent of individuals are from Hindu religion while only 5 number of individuals from village Khajuri are from Muslim religion.

## AWARENESS ABOUT THE K.V.K.

4.274 Awareness about the existence and services rendered by the K.V.K. is very important for the efficient functioning of this institution. The table below shows the details;

Table No. 4.74  
Awareness About K.V.K.

S. No.	Name of the Village	No. of Individual	Awareness about existence of K.V.K.		If 'yes' knowledge about its location		Awareness about services rendered by the K.V.K.	
			Yes	No	Yes	No	Yes	No
1	2	3	4	5	6	7	8	9
1.	Khajuri (Phanda)	52	52	0	52	0	52	0
2.	Polashganj (Bersiya)	20	20	0	20	0	20	0
3.	Mugalia Hat (Phanda)	116	116	0	116	0	116	0
	<b>Adopted Village</b>	188	188	0	188	0	188	0
4.	Sonkatch (Bersiya)	42	42	0	42	0	42	0
5.	Kolukhedi (Bersiya)	32	32	0	32	0	32	0
6.	Kurana (Phanda)	55	55	0	55	0	55	0
7.	Ratatal (Phanda)	45	45	0	45	0	45	0
8.	Ratibad (Phanda)	18	18	0	18	0	18	0
9.	Khamkheda (Phanda)	77	77	0	77	0	77	0
	<b>Cluster Village</b>	269	269	0	269	0	269	0
	<b>Total</b>	457	457	0	457	0	457	0

The above table shows the cent-percent awareness about the K.V.K. in terms of its location and services rendered by it which, ofcourse, is a very positive indication.

## KNOWLEDGE ABOUT SPECIFIC SERVICES RENDERED BY K.V.K.

4.275 The table below shows the details;

Table No. 4.75  
Specific Services Rendered by the K.V.K.

S. No.	Name of the Village	No. of Individual	Knowledge about vocational training		Knowledge about front line demonstration		Knowledge about on farm testing	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Khajuri (Phanda)	52	52	0	52	0	52	0
2.	Polashganj (Bersiya)	20	20	0	20	0	20	0
3.	Mugalia Hat (Phanda)	116	116	0	116	0	116	0
	<b>Adopted Village</b>	188	188	0	188	0	188	0
4.	Sonkatch (Bersiya)	42	42	0	42	0	42	0
5.	Kolukhedi (Bersiya)	32	32	0	32	0	32	0
6.	Kurana (Phanda)	55	55	0	55	0	55	0
7.	Ratatal (Phanda)	45	45	0	45	0	45	0
8.	Ratibad (Phanda)	18	18	0	18	0	18	0
9.	Khamkheda (Phanda)	77	77	0	77	0	77	0
	<b>Cluster Village</b>	269	269	0	269	0	269	0
	<b>Total</b>	<b>457</b>	<b>457</b>	<b>0</b>	<b>457</b>	<b>0</b>	<b>457</b>	<b>0</b>

4.276 Again the cent-percent knowledge about the three basic functions of the K.V.K. viz. vocational training, front line demonstration and on farm testings is a satisfactory factor that indicates the useful efforts of the K.V.K.

### FIELD VISITS OF K.V.K. SCIENTISTS

4.277 Regular field visits by the K.V.K. scientists are not only important from technical point of view but also very important to keep alive the confidence of the cultivators. In the following table an attempt has been made to highlight the extent of the visits of K.V.K. Scientists.

Table No. 4.76  
Field Visits of K.V.K. Scientists

S. No	Name of the Village	No. of Individual	Duration Gap			
			One month (1)	Two month (2)	More than two month (3)	Never (4)
1	2	3	4	5	6	7
1.	Khajuri (Phanda)	52	2	0	0	0
2.	Polashganj (Bersiya)	20	0	0	0	0
3.	Mugalia Hat (Phanda)	116	5	0	0	0
	<b>Adopted Village</b>	188	7	0	0	0
4.	Sonkatch (Bersiya)	42	0	0	0	0
5.	Kolukhedi (Bersiya)	32	1	0	0	0
6.	Kurana (Phanda)	55	0	0	0	2
7.	Ratatal (Phanda)	45	0	0	0	0
8.	Ratibad (Phanda)	18	0	0	0	0
9.	Khamkheda (Phanda)	77	0	0	0	0
	<b>Cluster Village</b>	269	1	0	0	2
	<b>Total</b>	457	8	0	0	2

4.278 The 8 number of individuals have reported that Scientist of KVK visit their fields with a duration gap of one month while 2 number of individuals from village Kurana (Cluster village) have reported that the Scientist of KVK never visited their fields. In rest of the 6 villages the visits are regular. **The frequent visits – at least once in fortnight is necessary to keep alive the implementation process. The Bhopal K.V.K. may plug this snag.**

#### THE STATUS OF REGULAR CONTACT WITH K.V.K.

4.279 The regular contact with the K.V.K. is one of the determining factors for implementation of agriculture related technologies in the field. The table below shows the details;

Table No. 4.77  
Status of Regular Contact with K.V.K.

S. No	Name of the Village	No. of Individual	Regular touch with K.V.K.		If yes reason			if 'no' the reason	
			Yes	No	For seed	plant protection	New technology	Distance	Do not feel the necessity
1	2	3	4	5	6	7	8	9	10
1.	Khajuri (Phanda)	52	50	2	2	5	42	2	0
2.	Polashganj (Bersiya)	20	20	0	6	3	11	0	0
3.	Mugalia Hat (Phanda)	116	113	3	22	0	100	3	0
	<b>Adopted Village</b>	188	183	5	30	8	153	5	0
4.	Sonkatch (Bersiya)	42	42	0	2	2	37	0	0
5.	Kolukhedi (Bersiya)	32	31	1	4	9	17	1	0
6.	Kurana (Phanda)	55	54	1	5	2	45	1	0
7.	Ratatal (Phanda)	45	45	0	8	5	31	0	0
8.	Ratibad (Phanda)	18	18	0	1	6	11	0	0
9.	Khamkheda (Phanda)	77	77	0	3	0	71	0	0
	<b>Cluster Village</b>	269	267	2	23	24	212	2	0
	<b>Total</b>	457	450	7	53	32	365	7	0

4.280 Out of the total of 457 individuals, 450 individuals [98.47 percent] are in regular contact with K.V.K. while only 7 number of individuals from villages Khajuri, Mugalia Hat [both adopted villages], Kolukhedi and Kurana [both cluster villages] are not in regular contact with the K.V.K. The situation is highly satisfactory. Out of 450 respondents, 365 individuals [81.11 percent] are keen over adoption of new technology [one of the main objectives of K.V.K.], 53 individuals [11.78 percent] go to K.V.K. for getting quality seed and rest 32 individuals [7.11 percent] contact the K.V.K. for plant protection activities. Seven number of individuals are not in regular contact with K.V.k. because of the distance factor which can not be helped by the K.V.K.

#### STATUS OF IMPLEMENTATION OF THE SERVICES OF THE K.V.K.

4.281 The table below shows the details;

Table No. 4.78  
Implementation of the Services of K.V.K.

S No.	Name of the Village	No. of Individual	Implementation of the services of K.V.K.		If yes in what fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Khajuri (Phanda)	52	50	2	52	0	0	0	0
2.	Polashganj (Bersiya)	20	20	0	20	0	0	0	0
3.	Mugalia Hat (Phanda)	116	113	3	113	0	0	0	0
	<b>Adopted Village</b>	188	183	5	185	0	0	0	0
4.	Sonkatch (Bersiya)	42	42	0	42	0	0	0	0
5.	Kolukhedi (Bersiya)	32	31	1	32	0	0	0	0
6.	Kurana (Phanda)	55	49	6	16	35	4	0	0
7.	Ratatal (Phanda)	45	45	0	42	3	0	0	0
8.	Ratibad (Phanda)	18	18	0	18	0	0	0	0
9.	Khamkheda (Phanda)	77	74	3	74	0	0	0	0
	<b>Cluster Village</b>	269	259	10	224	38	4	0	0
	<b>Total</b>	457	442	15	409	38	4	0	0

Table No. 4.78 [Contd...]  
Implementation of the Services of K.V.K.

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Not satisfied with new technology	Problem of resources	Satisfied with present status
1	2	11	12	13	14	15	16	17	18
1.	Khajuri (Phanda)	11	7	0	2	1	0	2	0
2.	Polashganj (Bersiya)	6	2	0	2	3	0	0	0
3.	Mugalia Hat (Phanda)	43	0	0	15	5	0	3	0
	<b>Adopted Village</b>	60	9	0	19	9	0	5	0
4.	Sonkatch (Bersiya)	7	8	3	0	1	0	0	0
5.	Kolukhedi (Bersiya)	0	11	4	2	2	1	0	0
6.	Kurana (Phanda)	1	0	0	0	0	0	0	6
7.	Ratatal (Phanda)	0	0	0	0	0	0	0	0
8.	Ratibad (Phanda)	6	0	0	0	0	0	0	0
9.	Khamkheda (Phanda)	14	12	0	9	3	0	3	0
	<b>Cluster Village</b>	28	31	7	11	6	1	3	6
	<b>Total</b>	88	40	7	30	15	1	8	6

4.282 The above table shows that 442 number of individuals have implemented the mandates of K.V.K. which is 96.72 percent to total of 457 individuals. **This is an achievement by itself. Only 15 number of individuals from villages Khajuri, Mugalia Hat, Kolukhedi and Khamkheda have not implemented the mandates of K.V.K. which, of course, is a possibility looking to the wide range of coverage, though the ideal situation should have been a cent-percent coverage.** It is worth mentioning here that the figures of itemwise coverage will not tally with the figure of 442 as the same person from agronomy might have implemented the improved technique in the fields of horticulture, animal husbandry, home science etc.

4.283 The subject wise coverage figures show that the **highest number of individuals [409] have gone for agronomy for implementation of improved technology** followed by home science [88 individuals], agro forestry [40 individuals] horticulture [ 38 individuals] watershed activities [30 individuals] training of rural youth [15 individuals] animal husbandry [8 individuals] and organic farming [7 individuals]. **In case of fisheries and poultry no implementation effort has been made by the sample individuals. Thus it may be seen that only on subjects of agronomy, horticulture, home science agro-forestry and watershed activities the individuals of our sample area have shown interest in implementing the improved techniques as in such fields they have more control over the resources. Only marginal interests have been expressed in case of animal husbandry, organic farming and training of rural youth. Animal husbandry is the sector where intensive efforts are required as this is the field with extensive scope for employment and income augmentation. The complete absence of response in case of fishery and poultry seems obvious as the individuals in rural areas in general do not have either adequate resource or sufficient knowledge to sustain such activities. A casual training of week or so by the K.V.K. is hardly meaningful to induce the individuals to take-up such activities on viable scale.**

#### STATISFACTION LEVEL OF THE INDIVIDUALS ABOUT THE SERVICES OF K.V.K.

4.284 The table below shows the details;

Table No. 4.79  
Satisfaction Level of the Individuals

S. No	Name of the Village	No. of Individual	Satisfied with the impact		If yes in what fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Khajuri (Phanda)	52	52	0	52	0	0	0	0
2.	Polashganj (Bersiya)	20	20	0	20	0	0	0	0
3.	Mugalia Hat(Phanda)	116	113	3	116	0	0	0	0
	<b>Adopted Village</b>	188	185	3	188	0	0	0	0
4.	Sonkatch (Bersiya)	42	42	0	41	0	0	0	0
5.	Kolukhedi (Bersiya)	32	31	1	29	0	0	0	0
6.	Kurana (Phanda)	55	55	0	32	21	0	0	0
7.	Ratatal (Phanda)	45	34	11	41	4	0	0	0
8.	Ratibad (Phanda)	18	18	0	18	0	0	0	0
9.	Khamkheda(Phanda)	77	75	2	75	0	0	0	0
	<b>Cluster Village</b>	269	255	14	236	25	0	0	0
	<b>Total</b>	457	440	17	424	25	0	0	0



Table No. 4.79 [Contd...]  
Satisfaction Level of the Individuals

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Technique is difficult to implement	Inputs are not easily available	Non-availability of advice in time
1	2	11	12	13	14	15	16	17	18
1.	Khajuri (Phanda)	16	5	0	2	1	0	0	0
2.	Polashganj (Bersiya)	6	2	0	2	4	0	0	0
3.	Mugalia Hat (Phanda)	42	0	0	15	6	0	0	0
	<b>Adopted Village</b>	64	7	0	19	11	0	0	0
4.	Sonkatch (Bersiya)	7	8	3	0	1	5	0	0
5.	Kolukhedi (Bersiya)	0	9	0	8	2	0	5	0
6.	Kurana (Phanda)	2	1	0	0	3	0	0	0
7.	Ratatal (Phanda)	0	0	0	0	0	2	0	0
8.	Ratibad (Phanda)	6	0	0	0	0	0	5	0
9.	Khamkheda (Phanda)	15	11	0	7	4	0	0	0
	<b>Cluster Village</b>	30	29	3	15	10	7	10	0
	<b>Total</b>	94	36	3	34	21	7	10	0

4.285 Out of 457 sample individuals 440 individuals have [96.28 percent] expressed their satisfaction for the services rendered by the K.V.K. while only 17 number of individuals from villages Mugalia Hat, kolukhedi, Ratatal and Khamkheda have shown their dissatisfaction mainly because of the fact that technique is difficult to implement [7 numbers] and non-availability of inputs [10 numbers] Both are very small problems which can easily be rectified by the K.V.K. to arrive at cent-percent level of satisfaction.

**4.286 Agronomy, Home Science, Agro-forestry, watershed and horticulture are the areas where the satisfaction level is maximum as these are the areas which have direct relevance to the livelihoods of our sample population. Only marginal extent of satisfaction has been shown for organic farming and training of rural youth. The level of satisfaction in case of animal husbandry is nil which is a serious matter. Since, in general, the villagers rear milch animals on a very small scale, not inducing them to learn any thing for such activity and also the K.V.K. personnel not taking much interest in imparting training because of non-availability of the activity. Thus in terms of K.V.K. effort this activity is entrapped in some vicious circle of non-availability and dis-interest which the K.V.K. personnel have to break by awaring the villagers about utility of animal husbandry.**

## IMPACT ON INCOME ENHANCEMENT

4.287 The validity of any effort is ultimately measured by its impact over income enhancement whether directly or indirectly. The table below shows the details;

Table No. 4.80  
Impact on Income Enhancement

S. No.	Name of the Village	No. of Individual	Income enhancement		If yes the fields				
			Yes (1)	No (2)	Agro-omy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Khajuri (Phanda)	52	52	0	50	0	0	0	0
2.	Polashganj (Bersiya)	20	20	0	20	0	0	0	0
3.	Mugalia Hat (Phanda)	116	115	1	113	0	0	0	0
	<b>Adopted Village</b>	188	187	1	183	0	0	0	0
4.	Sonkatch (Bersiya)	42	41	1	42	0	0	0	0
5.	Kolukhedi (Bersiya)	32	31	1	26	2	2	0	0
6.	Kurana (Phanda)	55	53	2	22	27	2	0	0
7.	Ratatal (Phanda)	45	43	2	36	7	0	0	0
8.	Ratibad (Phanda)	18	18	0	18	0	0	0	0
9.	Khamkheda (Phanda)	77	74	3	72	2	0	0	0
	<b>Cluster Village</b>	269	260	9	216	38	4	0	0
	<b>Total</b>	457	447	10	399	38	4	0	0

Table No. 4.80 [Contd...]  
Impact on Income Enhancement

S. No.	Name of the Village	If yes the fields							
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Could not follow the instruction	Problem of recourse	Non-availability technical advice in time
1	2	11	12	13	14	15	16	17	18
1.	Khajuri (Phanda)	13	7	0	2	1	0	0	0
2.	Polashganj (Bersiya)	6	2	0	2	3	0	0	0
3.	Mugalia Hat (Phanda)	40	0	0	15	9	0	0	0
	<b>Adopted Village</b>	59	9	0	19	13	0	0	0
4.	Sonkatch (Bersiya)	7	8	3	0	1	0	0	0
5.	Kolukhedi (Bersiya)	0	6	2	8	2	0	0	0
6.	Kurana (Phanda)	1	0	0	0	0	0	0	2
7.	Ratatal (Phanda)	0	0	0	0	0	0	2	0
8.	Ratibad (Phanda)	6	0	0	0	0	4	0	0
9.	Khamkheda (Phanda)	10	10	0	12	4	2	0	0
	<b>Cluster Village</b>	24	24	5	20	7	6	2	2
	<b>Total</b>	83	33	5	39	20	6	2	2

4.288 The above table shows that 447 individuals, which is 97.81 percent to total of 457 individuals, have reported the positive impact of K.V.K. activities over income enhancement. Only 10 individuals from villages Ratibad, Khamkheda, Ratatal and kurana have reported in negative **mainly because of their inability to follow the instructions, problem of resources and non-availability of technical advice in time. Except for the problem of resource availability, the rest of the problems can be solved by the K.V.K. personnel by little more sincerity. Here again the subject wise total positive responses will not tally with the positive response figure of 447 as the same individual may have positive statement for multiple of subjects.**

4.289 As is expected, maximum number of 399 individuals which is 87.31 percent to total of 457 individuals have reported agronomy as the main source of income enhancement followed by home science [83 individuals], watershed activities [39 individuals] horticulture [38 individuals], agro-forestry [33 individuals] and training of rural youth [20 individuals]. Only 4 and 5 individuals relating to animal husbandry and organic farming activities respectively have reported the impact over income enhancement. **The result is obvious as more persons have responded to the various training activities relating to the subjects like agronomy, horticulture, home science, watershed activities etc. that has direct relevance to their livelihoods.**

#### EXTENT OF INCOME ENHANCEMENT

4.290 In any kind of sample survey the most difficult work is to collect information regarding income from respondents as the persons are usually shy of giving correct information. However through indirect approach information regarding income has been collected which is given in the following table.

Table No. 4.81  
Extent of Income Enhancement

S. No	Name of the Village	No. of Individual	Percentage increases in income								
			1 to 10%	11 to 20%	21 to 30%	31 to 50%	51 to 60%	61 to 70%	71 to 80%	81 to 90%	91 to 100%
1	2	3	3	4	5	6	7	8	9	10	11
1.	Khajuri (Phanda)	52	40	12	0	0	0	0	0	0	0
2.	Polashganj (Bersiya)	20	0	1	10	3	6	0	0	0	0
3.	Mugalia Hat (Phanda)	116	52	22	28	14	0	0	0	0	0
	<b>Adopted Village</b>	188	92	35	38	17	6	0	0	0	0
4.	Sonkatch (Bersiya)	42	40	0	0	2	0	0	0	0	0
5.	Kolukhedi (Bersiya)	32	0	6	11	11	3	0	0	0	0
6.	Kurana (Phanda)	55	1	7	26	21	0	0	0	0	0
7.	Ratatal (Phanda)	45	13	17	11	2	0	0	0	0	0
8.	Ratibad (Phanda)	18	0	3	9	2	4	0	0	0	0
9.	Khamkheda (Phanda)	77	65	0	0	12	0	0	0	0	0
	<b>Cluster Village</b>	269	119	33	57	50	7	0	0	0	0
	<b>Total</b>	457	211	68	95	67	13	0	0	0	0

4.291 Out of 457 individuals 454 individuals have given information about extent of income enhancement. Only 3 individuals have abstained from giving such information for reasons best known to them. **The striking feature of the above table is that 80 individuals have reported the income enhancement within the range of 31 to 60 percent due to impact of various technologies introduced by K.V.K. which, in itself, is a startling performance.**

#### OPINION ABOUT CONTINUANCE OF THE SERVICES OF K.V.K.

4.292 An opinion survey was conducted among the sample individuals about the continuance of the services of K.V.K. The table below shows the details;

Table No. 4.82  
Opinion about Continuance of K.V.K. Services

S. No.	Name of the Village	No. of Individual	Continuation of the services of K.V.K.	
			Yes (1)	No (2)
1	2	3	4	5
1.	Khajuri (Phanda)	52	49	3
2.	Polashganj (Bersiya)	20	20	0
3.	Mugalia Hat (Phanda)	116	115	1
	<b>Adopted Village</b>	188	184	4
4.	Sonkatch (Bersiya)	42	42	0
5.	Kolukhedi (Bersiya)	32	31	1
6.	Kurana (Phanda)	55	53	2
7.	Ratatal (Phanda)	45	43	2
8.	Ratibad (Phanda)	18	18	0
9.	Khamkheda (Phanda)	77	73	4
	<b>Cluster Village</b>	269	260	9
	<b>Total</b>	457	444	13

4.293 The above table shows that out of 457 individuals, 444 individuals [97.16 percent] have reported in favour of the continuance of the K.V.K. services which they find very useful particularly in the fields of agronomy, home science, agro-forestry, organic farming watershed activities and training of rural youth etc. The organic farming, though hardly practiced by the cultivators of our study area but since they are aware of the value of such activity, have reported in favour of the continuance of this subject.

#### SUGGESTIONS FOR ADDITIONAL SERVICES TO BE RENDERED BY THE K.V.K.

4.294 Information regarding suggestions for additional services to be rendered by the K.V.K. has been collected from the individuals. The table below shows the details;

Table No. 4.83  
Suggestions for Additional Services to be rendered by K.V.K.

S. No	Name of the Village	No. of Individual	Suggestions for additional services by KVK			
			Production of by products of crops	Marketing strategy	Weather forecasting	Availability of agri. in puts at Gram Panchayat level
1	2	3	4	5	6	7
1.	Khajuri (Phanda)	52	9	34	4	5
2.	Polashganj (Bersiya)	20	2	11	2	5
3.	Mugalia Hat (Phanda)	116	23	80	0	8
	<b>Adopted Village</b>	188	34	125	6	18
4.	Sonkatch (Bersiya)	42	7	30	3	1
5.	Kolukhedi (Bersiya)	32	7	22	2	0
6.	Kurana (Phanda)	55	11	35	4	5
7.	Ratatal (Phanda)	45	16	20	3	6
8.	Ratibad (Phanda)	18	6	7	0	5
9.	Khamkheda (Phanda)	77	7	59	0	6
	<b>Cluster Village</b>	269	54	173	12	23
	<b>Total</b>	457	88	298	18	41

- 4.295 The above table shows that 445 individuals out of 457 individuals [97.37 percent] have given their suggestions for introduction of additional services to be rendered by the K.V.K. maximum number of 298 individuals have suggested for introduction of the subject of developing **marketing strategy** of their products for getting fair return of their efforts. **Marketing, of late has become an important constituent of any training programme. The intervention of the K.V.K. persons will be very useful, if some sort of training be organised for the beneficiary cultivators in liaison with Mandi Committees, particularly in view of the mal-practices of brokers leading to the exploitation of farmers in terms of return of their product.**
- 4.296 About the production of by-products of crops 88 number of individuals have suggested for introduction of this subject in K.V.Ks. training programme since this subject is effective for not only income enhancement but for employment generation as well. Intensive efforts are required for introduction of this subject as it may lead to processing activities which may be done in liaison with Industries Department of the area.
- 4.297 Forty one and 18 number of individuals have suggested for items like weather forecasting and availability of agriculture inputs at Gram Panchayat level which though can not be the subjects of training but the organizing efforts of the persons of K.V.K. may yield results.

The K.V.K. personnel may suggest the cultivators to see the T.V. programme relating to agriculture where the news about weather forecaste is regularly given at some community point preferably at Gram Panchayat level. About availability of agriculture input at Gram Panchayat level an effort may be made along with the Chief Executive Officer of Zila Panchayat in this direction.

- 4.298 It is therefore worth considering to incorporate in the mandate of K.V.K., the subjects like production of by products and development of marketing strategy of the product of the cultivators.**

#### UTILIZATION OF THE ENHANCED INCOME

- 4.299 Proper utilization of the income is equally important as its generation. The table below shows the utilization of enhanced income relating to agriculture activities;

Table No. 4.84  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Tractor		Harvester		Thresher	
			Yes	No	Yes	No	Yes	No
1	2	3	4	5	6	7	8	9
1.	Khajuri (Phanda)	52	0	52	0	52	2	50
2.	Polashganj (Bersiya)	20	0	20	0	20	6	14
3.	Mugalia Hat (Phanda)	116	2	114	0	116	0	116
	<b>Adopted Village</b>	188	2	186	0	188	8	180
4.	Sonkatch (Bersiya)	42	0	42	0	42	10	32
5.	Kolukhedi (Bersiya)	32	0	32	0	32	4	28
6.	Kurana (Phanda)	55	0	55	0	55	5	50
7.	Ratatal (Phanda)	45	0	45	0	45	1	44
8.	Ratibad (Phanda)	18	0	18	0	18	3	15
9.	Khamkheda (Phanda)	77	2	75	0	77	0	77
	<b>Cluster Village</b>	269	2	267	0	269	23	246
	<b>Total</b>	457	4	453	0	457	31	426

Table No. 4.84 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Plough		Seed drill		Bullock pairs	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	10	11	12	13	14	15
1.	Khajuri (Phanda)	52	3	49	1	51	9	43
2.	Polashganj (Bersiya)	20	1	19	0	20	2	18
3.	Mugalia Hat (Phanda)	116	19	97	2	114	32	84
	<b>Adopted Village</b>	188	23	165	3	185	43	145
4.	Sonkatch (Bersiya)	42	0	42	0	42	10	32
5.	Kolukhedi (Bersiya)	32	10	22	0	32	4	28
6.	Kurana (Phanda)	55	9	46	6	49	8	47
7.	Ratatal (Phanda)	45	8	37	1	44	13	32
8.	Ratibad (Phanda)	18	5	13	0	18	5	13
9.	Khamkheda (Phanda)	77	0	77	0	77	18	59
	<b>Cluster Village</b>	269	32	237	7	262	58	211
	<b>Total</b>	457	55	402	10	447	101	356

Table No. 4.84[Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Power/Knapsac sprayer		Handhoe		Storage facility	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	16	17	18	19	20	21
1.	Khajuri (Phanda)	52	0	52	2	50	0	52
2.	Polashganj (Bersiya)	20	0	20	3	17	0	20
3.	Mugalia Hat (Phanda)	116	15	101	3	113	0	116
	<b>Adopted Village</b>	188	15	173	8	180	0	188
4.	Sonkatch (Bersiya)	42	0	42	0	42	0	42
5.	Kolukhedi (Bersiya)	32	0	32	5	27	0	32
6.	Kurana (Phanda)	55	2	53	1	54	1	54
7.	Ratatal (Phanda)	45	2	43	3	42	0	45
8.	Ratibad (Phanda)	18	0	18	8	10	0	18
9.	Khamkheda (Phanda)	77	13	64	0	77	0	77
	<b>Cluster Village</b>	269	17	252	17	252	1	268
	<b>Total</b>	457	32	425	25	432	1	456

Table No. 4.84 [Contd...]  
Utilization of Enhanced Income

S. No	Name of the Village	No. of Individual	Enhanced income led to purchase of			
			Tube well /Dug well		Electric/diesel motor	
			Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	22	23	24	25
1.	Khajuri (Phanda)	52	0	52	3	49
2.	Polashganj (Bersiya)	20	0	20	7	13
3.	Mugalia Hat (Phanda)	116	2	114	21	95
	<b>Adopted Village</b>	188	2	186	31	157
4.	Sonkatch (Bersiya)	42	0	42	0	42
5.	Kolukhedi (Bersiya)	32	0	32	5	27
6.	Kurana (Phanda)	55	1	54	0	55
7.	Ratatal (Phanda)	45	0	45	4	41
8.	Ratibad (Phanda)	18	0	18	0	18
9.	Khamkheda (Phanda)	77	0	77	1	76
	<b>Cluster Village</b>	269	1	268	10	259
	<b>Total</b>	457	3	454	41	416

4.300 The above table shows that out of 457 individuals, 303 individuals [66.30 percent] have indicated the utilization of the enhanced income for purchase of agriculture implements/inputs on items like tractor [4 persons] thresher [31 persons] plough 55 persons] seed drill [10 persons] bullock pairs [101 persons], power knapsack sprayer [32 persons] hand hoe [25 persons] storage facility [1 person] tube well/dug well [3 persons] and electric/diesel motor [41 persons]. The level of expenditure is justified as the cultivators do not purchase agriculture inputs too frequently.

#### **IMPACT OF ENHANCED INCOME OVER EDUCATION LEVELS**

4.301 Education is important social parameter which is reflected over efficient performance of any activity as it improves the quality of human resource. The table below shows the impact of enhanced income over levels of education in our area of study;

Table No. 4.85

## Impact of Enhanced Income Over Levels of Education

S. No	Name of the Village	No. of Individual	Impact on education due to enriched income		If yes in what manner				
			Yes (1)	No (2)	Male Children go to primary/middle (1)	Female Children go to primary/middle (2)	More male children attend secondary level education (3)	More female children attend Female secondary level (4)	Male Female children go to higher education non (5)
1	2	3	4	5	6	7	8	9	10
1.	Khajuri (Phanda)	52	44	8	22	20	7	0	0
2.	Polashganj (Bersiya)	20	16	4	13	10	0	0	3
3.	Mugalia Hat (Phanda)	116	110	6	69	22	11	0	3
	<b>Adopted Village</b>	188	170	18	104	52	18	0	6
4.	Sonkatch (Bersiya)	42	40	2	13	12	4	5	0
5.	Kolukhedi (Bersiya)	32	25	7	16	7	2	0	3
6.	Kurana (Phanda)	55	43	12	30	14	0	0	0
7.	Ratatal (Phanda)	45	39	6	23	8	5	0	1
8.	Ratibad (Phanda)	18	18	0	10	7	1	0	0
9.	Khamkheda (Phanda)	77	60	17	28	11	13	2	0
	<b>Cluster Village</b>	269	225	44	120	59	25	7	4
	<b>Total</b>	457	395	62	224	111	43	7	10

Table No. 4.85 [Contd...]

## Impact of Enhanced Income Over Levels of Education

S. No.	Name of the Village	No. of Individual	If no the reasons						
			Education is no priority (1)	Purchase of agr. inputs (2)	Exp. on religious/social a rituals (3)	Purchase of items TV fridge two wheeler (4)	Consumption of intoxicants (5)	Deposit in the bank (6)	Debt repayment (7)
1	2	3	11	12		13	14	15	16
1.	Khajuri (Phanda)	52	1	0	1	0	0	2	0
2.	Polashganj (Bersiya)	20	1	0	0	0	0	2	0
3.	Mugalia Hat (Phanda)	116	0	9	0	0	0	0	2
	<b>Adopted Village</b>	188	2	9	1	0	0	4	2
4.	Sonkatch (Bersiya)	42	2	1	0	0	0	2	0
5.	Kolukhedi (Bersiya)	32	1	3	0	0	0	2	0
6.	Kurana (Phanda)	55	1	0	0	2	0	2	5
7.	Ratatal (Phanda)	45	0	0	0	0	0	5	0
8.	Ratibad (Phanda)	18	0	0	0	0	0	0	0
9.	Khamkheda (Phanda)	77	1	9	4	0	0	2	0
	<b>Cluster Village</b>	269	7	13	4	2	0	13	5
	<b>Total</b>	457	9	22	5	2	0	17	7



4.302 Out of 457 individuals, 395 individuals have informed about positive impact of enhanced income over levels of education which comes to 86.43 percent to total number of respondents. In case of elementary level of education the combined figure of boys and girls account for 335 individuals which is 84.81 percent to the figure of 395 of positive respondents, which ofcourse is an encouraging picture that shows the awareness of the sample population towards value of educating their wards. Similarly the combined information of secondary and higher level of education is 60 individuals who have reported about expenditure over such levels of education, which again is not a grim picture as infrastructural facilities of secondary and higher levels of education are not available within the easy reach of the villages.

4.303 The important reasons given by 62 individuals for not spending the portion of enhanced income over educations are mainly due to purchase of agriculture implements, increasing the bank deposits and debt repayment. However all these excuses may be overcome by the extension effort of the K.V.K. personnel by convincing the villagers about value of education while they impart vocational training.

### IMPACT OF ENHANCED INCOME OVER HEALTH STATUS

4.304 Health is again an important social factor that accounts for efficiency in pursuance of any occupation what-so-ever. The table below shows the impact of enhanced income over health status of sample population.

Table No. 4.86  
Impact of Enhanced Income over Health Conditions

S. No.	Name of the Village	No. of Individual	Impact of Additional income		If yes in what manner				
			Yes (1)	No (2)	Services of medical personnel (1)	Vaccination of children/ women done (2)	Child nutrition (3)	Female nutrition during gestation (4)	Adoption of Family welfare measures
1	2	3	4	5	6	7	8	9	10
1.	Khajuri (Phanda)	52	52	0	14	13	21	4	0
2.	Polashganj (Bersiya)	20	18	2	2	3	13	0	0
3.	Mugalia Hat (Phanda)	116	116	0	22	53	35	1	5
	<b>Adopted Village</b>	188	186	2	38	69	69	5	5
4.	Sonkatch (Bersiya)	42	42	0	10	7	22	3	0
5.	Kolukhedi (Bersiya)	32	29	3	0	7	16	2	4
6.	Kurana (Phanda)	55	54	1	2	15	35	0	2
7.	Ratatal (Phanda)	45	36	9	1	11	21	3	0
8.	Ratibad (Phanda)	18	18	0	0	7	9	1	1
9.	Khamkheda (Phanda)	77	77	0	33	10	34	0	0
	<b>Cluster Village</b>	269	256	13	46	57	137	9	7
	<b>Total</b>	457	442	15	84	126	206	14	12

Table No. 4.86 [Contd...]  
Impact of Enhanced Income over Health Conditions

S. No.	Name of the Village	No. of Individual	If no the reasons						
			Health is no priority (1)	Believe in local healing methods (2)	Purchase of agri. inputs (3)	Exp. on religious functions (4)	Luxury items TV Fridge, Two wheeler, Four wheeler (5)	Consumption of intoxicants (6)	Deposited in bank (7)
1	2	3	11	12	13	14	15	16	17
1.	Khajuri (Phanda)	52	0	0	0	0	0	0	0
2.	Polashganj (Bersiya)	20	4	0	0	0	0	0	0
3.	Mugalia Hat (Phanda)	116	0	0	0	0	0	0	0
	<b>Adopted Village</b>	188	4	0	0	0	0	0	0
4.	Sonkatch (Bersiya)	42	0	0	0	0	0	0	0
5.	Kolukhedi (Bersiya)	32	3	0	0	0	0	0	0
6.	Kurana (Phanda)	55	1	0	0	0	0	0	0
7.	Ratatal (Phanda)	45	2	2	0	0	0	3	0
8.	Ratibad (Phanda)	18	0	0	0	0	0	0	0
9.	Khamkheda (Phanda)	77	0	0	0	0	0	0	0
	<b>Cluster Village</b>	269	6	2	0	0	0	3	0
	<b>Total</b>	457	10	2	0	0	0	3	0

4.305 Out of 457 individuals, 442 individuals [96.72 percent] have reported about positive impact of income over health status while only 15 individuals [3.28 percent] have refused about such impact mainly on the grounds as health being no priority [10 individuals] consumption of intoxicants [3 individuals] and believing in local healing methods [2 individuals]. **Though the extent of negative response is only marginal but reasons like health being no priority or consumption of intoxicants are damaging attitudes requiring immediate eradication lest they go deep into the thinking of our sample population. Here again agriculture scientists while their trip to villages in connection with organizing Front line demonstration may emphasize upon the value of good health even at the cost of reducing some expenditure over the essentials of agriculture inputs.**

4.306 The items of positive responses like hiring of the services of medical personnel [84 individuals], vaccination of children and women [126 individuals], expenditure on child nutrition [206 individuals] female nutrition during gestation period [14 individuals] and adoption of family welfare measures [12 individuals] are indicative of healthy trend that shows the awareness of our sample individuals towards health conditions, particularly that of women and children.

## IMPACT OF ENHANCED INCOME OVER POTABLE DRINKING WATER SUPPLY

4.307 The table below shows the details;

Table No. 4.87

### Impact of Enhanced Income over Potable Drinking Water Supply

S. No.	Name of the Village	No. of Individual	Improve in potable drinking water		If yes in what way		
			Yes (1)	No (2)	Piped water supply	Hand pump (2)	Aqua guard (3)
1	2	3	4	5	6	7	8
1.	Khajuri (Phanda)	52	5	47	1	4	0
2.	Polashganj (Bersiya)	20	8	12	1	8	0
3.	Mugalia Hat (Phanda)	116	20	96	4	9	1
	<b>Adopted Village</b>	188	33	155	6	21	1
4.	Sonkatch (Bersiya)	42	4	38	2	0	0
5.	Kolukhedi (Bersiya)	32	15	17	0	13	0
6.	Kurana (Phanda)	55	24	31	8	9	4
7.	Ratatal (Phanda)	45	6	39	1	5	2
8.	Ratibad (Phanda)	18	6	12	5	6	0
9.	Khamkheda (Phanda)	77	6	71	6	5	0
	<b>Cluster Village</b>	269	61	208	22	38	6
	<b>Total</b>	457	94	363	28	59	7

Table No. 4.87 [Contd...]

### Impact of Enhanced Income over Potable Drinking Water Supply

S. No.	Name of the Village	No. of Individual	If No the reasons					
			Drinking water is no priority (1)	Purchase of agri. inputs (2)	Exp. on religious, social rituals (3)	Luxury items TV Fridge, Two wheeler, Four wheeler (4)	Consumption of intoxicants (5)	Deposited in bank (6)
1	2	3	9	10	11	12	13	14
1.	Khajuri (Phanda)	52	17	0	0	0	0	30
2.	Polashganj (Bersiya)	20	11	0	0	0	0	0
3.	Mugalia Hat (Phanda)	116	86	1	0	0	0	4
	<b>Adopted Village</b>	188	114	1	0	0	0	34
4.	Sonkatch (Bersiya)	42	25	0	0	0	0	15
5.	Kolukhedi (Bersiya)	32	19	0	0	0	0	0
6.	Kurana (Phanda)	55	24	2	0	0	0	0
7.	Ratatal (Phanda)	45	26	1	0	2	0	5
8.	Ratibad (Phanda)	18	29	0	0	0	0	0
9.	Khamkheda (Phanda)	77	61	1	1	1	0	2
	<b>Cluster Village</b>	269	184	4	1	3	0	22
	<b>Total</b>	457	298	5	1	3	0	56

4.308 A reverse situation can be visualized from the above table where the negative response is to the tune of 363 individuals [79.43 percent to total of 457 individuals] while the positive response is by 94 individuals [20.57 percent] which underlines one point that the availability of potable drinking water in rural areas is no priority in general and for our sample area in particular which is proved by the fact that 298 individuals [82.09 percent to 363 negative respondents] have said about lack of priority of the potable drinking water supply. The majority of the positive respondents have indicated the spending of a portion of enhanced income over installation of hand pumps. **The solution to this problem of neglect of potable drinking water lies in enhancement of agricultural income of the rural population which if achieved will solve the problem of drinking water and also sanitation as the enhanced income induces the individuals to take care of the finer details of life. When the majority of the rural population has to grapple with the basic problem of earning adequate food, the idea of getting potable drinking water becomes a matter of pipe dream.**

### IMPACT OF ENHANCED INCOME OVER HOUSING CONDITIONS

4.309 The table below shows the details;

Table No. 4.88  
Impact of Enhanced Income over Housing Conditions

S. No	Name of the Village	No. of Individual	Enhancement in income resulted in improved housing conditions		If yes in what way		
			Yes (1)	No (2)	Semi pucca house constructed (1)	Pucca house constructed (2)	Separate cattle shed constructed (3)
1	2	3	4	5	6	7	8
1.	Khajuri (Phanda)	52	33	19	22	7	4
2.	Polashganj (Bersiya)	20	9	11	0	7	0
3.	Mugalia Hat (Phanda)	116	48	68	32	5	14
	<b>Adopted Village</b>	188	90	98	54	19	18
4.	Sonkatch (Bersiya)	42	23	19	13	0	10
5.	Kolukhedi (Bersiya)	32	9	23	3	5	0
6.	Kurana (Phanda)	55	12	43	7	3	0
7.	Ratatal (Phanda)	45	5	40	4	1	0
8.	Ratibad (Phanda)	18	3	15	1	2	0
9.	Khamkheda (Phanda)	77	32	45	14	2	18
	<b>Cluster Village</b>	269	84	185	42	13	28
	<b>Total</b>	457	174	283	96	32	46

Table No. 4.88[Contd...]  
Impact of Enhanced Income over Housing Conditions

S.No	Name of the Village	No. of Individual	If No the reasons					
			Better housing no priority (1)	Purchase of agr. inputs (2)	Exp. on religious/social rituals (3)	Luxury items TV, Fridge, Two wheeler, Four wheeler (4)	Consumption of intoxicants (5)	Deposited in bank (6)
1	2	3	9	10	11	12	13	14
1.	Khajuri (Phanda)	52	8	0	0	0	0	13
2.	Polashganj (Bersiya)	20	8	0	0	0	0	14
3.	Mugalia Hat (Phanda)	116	9	30	0	2	0	36
	<b>Adopted Village</b>	188	25	30	0	2	0	63
4.	Sonkatch (Bersiya)	42	4	10	0	0	0	7
5.	Kolukhedi (Bersiya)	32	5	1	0	1	0	15
6.	Kurana (Phanda)	55	13	4	0	1	0	19
7.	Ratatal (Phanda)	45	6	6	0	0	0	19
8.	Ratibad (Phanda)	18	3	1	0	0	0	5
9.	Khamkheda (Phanda)	77	30	11	2	0	0	0
	<b>Cluster Village</b>	269	61	33	2	2	0	65
	<b>Total</b>	457	86	63	2	4	0	128

4.310 The above table shows that out of 457 sample individuals 174 individuals [38.07 percent to total individuals] have reported about spending of enhanced income over improving the housing conditions by constructing semi-pucca houses [96 individuals], puccas houses [32 individuals] and constructing cattleshed [46 individuals].

4.311 Against the total number of 457 individuals, 283 individuals have negative responses that constitute 61.93 percent to total individuals. **However, this situation is expected as people do not construct, extend or renovate the houses frequently.** However reasons forwarded are mainly better housing being no priority [86 individuals], purchase of agriculture inputs, [63 individuals] and deposits in the bank [128 individuals]. **The bank deposit factor is an encouraging trend that indicates the desire for saving by the sample population.**

#### **AWARENESS ABOUT WELFARE SCHEMES INITIATED BY THE STATE GOVERNMENT ALSO WITH ASSISTANCE FROM GOVERNMENT OF INDIA**

4.312 In what follows an attempt has been made to present the extent of awareness of the individuals towards various welfare schemes initiated by the State Government. Though this information has no direct relationship with the functioning of the K.V.K. but the awareness towards such scheme will help the sample individuals to take benefit of the schemes as and when required. Moreover popularizing such schemes is also one of the functions of the K.V.K. Therefore extent of positive response towards such schemes will be a credit to the K.V.K. functionaries. In the following paragraphs the details of a few import welfare schemes have been given which have direct impact over the livelihoods of sample population.

## JAWAHAR GRAM SAMRIDHI YOJANA

4.313 The former scheme of Jawahar Rojgar Yojna renamed as Jawahar Gram Samridhi Yojna was started from the year 1999-2000 with the basic objective of creating community assets of permanent nature, thereby providing employment to local labour. The survey results show that out of 457 individuals only 63 individuals [13.79 percent] are aware of this scheme. The rest of the sample individuals are unaware of its existence. This is a scheme important to any area from the view points of both creation of community assets and employment opportunities that help in development. The K.V.K. functionaries may make concentrated efforts to make people aware about the benefits of this scheme in cooperation with concerned government functionaries.

## EMPLOYMENT ASSURANCE SCHEME

4.314 Started from the year 1997-98, the scheme aims at providing employment to rural population during lean season of agriculture thereby creating community assets. **The response to this scheme is somewhat encouraging as 110 individuals [24.07 percent] are aware about the scheme**

## ESTABLISHMENT OF HAND LOOM UNITS

4.315 Under this scheme units having 5 to 20 looms are registered and loom-shed subsidy and margin money subsidy are given. **Only one person of our sample area is aware of the scheme which shows the plight of implementation of this scheme in our area of study. When even awareness is not there, there can hardly be any possibility of its implementation. The huge administrative expenditure being incurred seems futile unless the benefits of the scheme is availed by the individuals for whom the scheme has been conceived.**

## ESTABLISHMENT OF SERICULTURE UNITS

4.316 Under this scheme the beneficiaries are given training on various aspects of sericulture activities to supplement their income. For this purpose Resham Kendras spread over in districts assume nodal responsibilities to train the beneficiaries and augment their infrastructure. **In our area of study only one individual is aware of this scheme that shows apathy of the field level government functionaries to popularize the scheme which is so important from both income and employment generation point of views.**

## ESTABLISHMENT OF FAMILY BASED RURAL INDUSTRIAL UNITS

4.317 The scheme is being implemented by Madhya Pradesh Khadi and Gramodayog Board. Under this scheme the units pertaining to SC, ST and OBCs are given 90 percent subsidy on capital loan and remaining 10 percent loan is given by the banks. **The levels of awareness about this scheme is only 5 persons which again is far from being satisfactory.**

## MID DAY MEALS

4.318 The programme has proved to be an effective incentive of retention of school going children of primary education level, specially the children coming from low income group. Under this programme cooked meals are provided to the school going children. **The level of awareness of this scheme is encouraging as 383 sample individuals [83.81 percent to total of 457 sample individuals] are aware about this scheme.**

## SUPPLY OF TEXT BOOKS

4.319 Under this scheme all the students of primary standard [classes 1<sup>st</sup> to 5<sup>th</sup>] belonging to SC, ST and OBCs and students of classes 1<sup>st</sup> to 3<sup>rd</sup> standards belonging to general communities are given text books free of cost. As per our survey results 192 individuals [42.01 percent] are aware of the scheme while 265 number of individuals [57.99 percent] are not aware of the scheme. **Since the supply of text books free of cost is mandatory, the individuals unaware of the scheme are either persons having their wards above primary standards or the rate of drop-out is so high that they are not particular about the scheme. However an effort both by persons of school education department and K.V.K. may reduce such extent of unawareness.**

## WOMEN SELF HELP GROUP

4.320 With a view to ensure social and economic empowerment of women, self help groups [S.H.Gs.] are formed for making the women confident to face challenges on all fronts, be it social or economic. In this scheme, the members of the group deposit a part of their saving in the fund raised by the group and may take loan to meet their various social and economic obligations, subject to return of the amount with interest. **In our area of study 383 individuals out of 457 persons [83.81 percent] are aware of the scheme which is very encouraging that shows that particularly the women folk are aware of the value of the scheme. Unawareness aspect about 74 individuals may be easily overcome by little more extension efforts by concerned government officials and persons of K.V.K.**

## GRAMYA YOJNA

4.321 Under this scheme the poor women are given interest free loan upto Rs. 500.00 towards starting a small business. After repayment of this loan within one year, second loan to the tune of Rs. 1500.00 is given. **The extent of awareness about this scheme [161 persons] though is not very satisfactory as this is the area important for women empowerment, a little more extension effort by persons of Woman and Child Development may lead to starting results and reduce the extent of unawareness by 296 persons to a very negligible point.**

## AUSMATI YOJNA

4.322 With the objective of providing better medical assistance to the women belonging to the families living below the poverty line in rural areas, this scheme was started in the year 1999. **For this scheme again the extent of unawareness by 265 individuals [57.99 percent to total individuals] against 192 persons having awareness may well be removed by Department of Woman and Child Development by intensive extension efforts.**

4.323 In the following paragraphs an attempt has been made to summarise the individual particulars of adopted and cluster villages.

- The frame of the present part of the narration is 457 individuals which is 25 percent of the family members of 25 percent sample households.
- The criteria for selection of individuals are – the individual should be the adult member of the family, he should be associated with any programme of the K.V.K., he should be literate – may be without having any formal education.

- The bulk of 360 individuals are from O.B.C. group that accounts for 78.77 percent to total number of 457 individuals.
- Regarding religion 98.91 percent individuals follow Hindu religion.
- The cent-percent awareness about the services rendered by the K.V.K. is no doubt a positive indication.
- Gap in visits by the scientists in few case for one month and complete absence of visit by two number of scientists at village Kurana is matter of concern requiring the attention of the K.V.K. authorities.
- The regular contact of 98.47 percent of individuals is positive achievement of K.V.K. Out of 450 individuals who are in regular contact with K.V.K. 409 individuals [90.89 percent to total of 450 individuals] have gone for agronomy for implementation of improved technology followed by 88 individuals for home science [19.56 percent], 40 individuals for agro-forestry [8.89 percent], 38 individuals for horticulture [8.44 percent], 30 individuals for watershed activities [6.67 percent] 15 individuals for training of rural youth [3.33 percent], 8 individuals for animal husbandry [1.78 percent] and 7 individuals for organic farming [1.56 percent]. In case of fisheries and poultry no implementation effort has been made by the sample individuals.
- Regarding level of satisfaction of individuals about the services of K.V.K. agronomy, home science, agro-forestry watershed and horticulture are the areas of maximum satisfaction as these are the areas having direct relevance to the livelihoods of our sample population. Only a marginal extent of satisfaction has been shown for organic farming and training of rural youth. The level of satisfaction in case of animal husbandry is nil which is a serious matter as the animal husbandry is an important activity having immense potential for employment and income augmentation.
- Regarding impact of K.V.K. activities over income enhancement, 447 individuals, which is 97.81 percent to total of 457 individuals have reported agronomy as the main source of income enhancement followed by home science [18.16 percent], watershed activities [8.53 percent] horticulture [8.31 percent], agro-forestry [7.22 percent] and training of rural youth [4.38 percent].
- Regarding extent of income enhancement, the striking feature is that 80 individuals [17.62 percent to total of 454 individuals] have reported the income within the range of 31 to 60 percent due to impact of various technologies introduced by KVK which shows the startling performance of the KVK.
- As regards the continuance of the services of KVK the result of the survey shows that 444 individuals [96.16 percent to total of 457 individuals] have reported in favour of the continuance of the KVK services which they find very useful. This again is one of the positive achievements of KVK.
- As regards suggestions for introducing additional services to be rendered by KVK 445 individuals out of 457 individuals [97.37 percent] have given a positive response for introduction of the subject of marketing strategy by 298 individuals [66.97 percent to total of 445 individuals] while 88 number of individuals [19.78 percent] were of the opinion of the introduction of subject regarding making of by products and 18 number of individuals [4.04 percent] have suggested for items like weather forecasting and making available the agriculture inputs at Gram Panchayat levels. It is therefore, worth considering to incorporate in the mandate of the KVK, the subjects like production of by products and development of marketing strategy of the products of the cultivators.



- Regarding utilization of enhanced income 303 individuals [66.30 percent to total of 457 individuals] have indicated the utilization of the enhanced in for purchase of various agriculture inputs.
- Similarly 395 individuals have informed about positive impact of enhanced income over various levels of education that comes to 86.43 percent to total number of 457 respondents. The result no doubt is encouraging that indicates the awareness of our sample population towards value of education.
- Similarly out of 457 individuals, 442 individuals [96.72 percent] have reported about positive impact of enhanced income over health status.
- A reverse situation can be visualized regarding availability of potable drinking water where the negative response is to the tune of 363 individuals [79.43 percent to total of 457 individuals] while the positive response is by 94 individuals [20.57 percent] which underlines one point that the availability of potable drinking water in rural areas is no priority in general and for our sample area in particular.
- Regarding impact of income over housing conditions, out of 457 individuals, 174 individuals [38.07 percent to total individuals] have reported about spending of enhanced income over improving housing conditions, while 283 individuals [61.93 percent] have forwarded a negative response. This situation is expected as people do not construct, extend or renovate the house frequently.
- Regarding awareness about various welfare schemes initiated by the State Government with assistance from the Government of India, it has been observed that in case of schemes Like Jawahar Gram Samridhi Yojna, Establishment of Hand Loom Units, Establishment of Sericulture Units, Establishment of Family Based Rural Industrial Units and Gramya and Ausmati Yojna the level of awareness is poor while in case of schemes like Employment Assurance Scheme, Mid Day Meals, Supply of Text Books and Woman Self Help Groups the level of awareness is encouraging.

## RESULTS OF SURVEY–INDIVIDUAL PARTICULARS–CONTROL VILLAGE

- 4.324 In the following paragraphs and attempt has been made to record the reactions of 25 percent of individuals taken from control village where there is no intervention of KVK. The Total number of family members of the 25 percent of the households for control village of Manikhedi Kot is 90, the twenty five percent of which is 23 individuals. Therefore, the reactions of 23 number of individuals have been recorded to have a comparison with the reactions of individuals of adopted and cluster villages having direct intervention of KVK. The criteria for selection of individuals for control village are similar to that for adopted and cluster villages.
- 4.325 Like adopted and cluster villages, the 22 individuals out of 23 are from the community of **Other Backward Classes [O.B.Cs.]**, while only one individual is from General Community. Similarly the cent-percent individuals are from **Hindu religion**.
- 4.326 Regarding awareness about the **existence of KVK**, 18 number of individuals out of total of 23 individuals [78.26 percent] are aware of its existence while only 5 number of persons have shown their unawareness **against the level of cent-percent awareness by the individuals of adopted and cluster villages which seems obvious as in such case the intervention of the KVK is direct**. Similarly about the **location of KVK**, 15 persons have given a positive respons [65.22 percent] while 8 number of individuals [34.78 percent] have given a negative respons **against the cent-percent positive reactions from the individuals of adopted and cluster villages which again seems obvious**. Regarding awareness about

services rendered by the KVK, only one individual has given a positive reply while 22 individuals have shown their unawareness **against the cent-percent positive respons from adopted and cluster villages.**

- 4.327 **Regarding satisfaction level of per-hectare yield of agronomical and horticulture crops,** the 22 individuals out of 23 sample individuals have reacted **in negative way** while only one individual is satisfied with the prevailing status of per-hectare yield **whereas in case of the adopted and cluster villages the satisfaction level is 96.28 percent of the total of 457 individuals, particularly regarding the production of agronomical and horticulture crops.** As regards suggestions for improvement in productivity, 14 individuals [60.87 percent to total of 23 individuals] have asked for training regarding application of agricultural inputs while 3 individuals each [13.04 percent] have asked for promotion of water conservation and crop rotation and 2 individuals [8.70 percent] have suggested for organizing training about organic farming. No response was there for training regarding contour bunding and for any 'other' activities.
- 4.328 **Regarding satisfaction level of present status of livestock and dairy activities,** 21 number of individuals [91.30 percent to total of 23 respondents] have expressed their **dissatisfaction** while only 2 individuals [8.70 percent] are satisfied with the present status. The suggestions forwarded for improvement are improved breed production facilities by 7 individuals [30.43 percent] artificial insemination facilities by 13 individuals [56.62 percent] and improved feed facilities by one individual [4.35 percent]. **It will be worth mentioning that even in cases of adopted and cluster villages the satisfaction level for livestock and poultry activities is nil.**
- 4.329 As for **poultry development,** all the 23 participants have expressed their dissatisfaction over the present state of affairs. For improvement in present status, 13 individuals [56.62 percent to total of 23 individuals] have advocated for improved breed production, 9 individuals [39.13 percent] for broiler production facilities and one individual [4.35 percent] for improved feed management. In case of adopted and cluster villages also the satisfaction level for this activity is nil.
- 4.330 **Regarding fishery development the level of dissatisfaction** is again cent-percent and the suggestions are for training about supply of improved feed by 6 individuals [26.09 percent to total of 23 individuals], training about use of improved implementation by 17 persons [73.91 percent]. **It is worth mentioning again that for adopted and cluster villages the level of satisfaction for this activity is also nil.**
- 4.331 Important information has been collected about adoption of home science activities that may augment the income of the family. **Toy making** is one activity where all the 23 individuals have asked for training facility that may augment their family income, followed by pickle preparation by 19 individuals [82.61 percent to total of 23 individuals], papad, jam and jelly preparation by 13 individuals [56.52 percent], food preservation by 11 individuals [47.83 percent], jute items by 5 individuals [21.74 percent] and backing by 3 individuals [13.04 percent]. **It is again worth mentioning that considerable interests have been shown by the individuals of adopted and cluster villages towards implementation of the aforesaid items that come under the group of home science.**
- 4.332 **Regarding training of rural youth for self employment** 21 individuals [91.30 percent to total of 23 individuals] have advocated for motor binding activities followed by diesel engine repairs by 16 individuals [69.57 percent], cycle/scooter repair by 12 individuals [52.17 percent] and one individual each for masonry and tailoring [4.35 percent] **In case of**

**adopted and cluster villages the main emphasis is for motor binding and engine repair activities where the placements have been recorded.**

4.333 **Regarding educational status** of the sample population it has been reported by 13 number of individuals that their wards attend the elementary level of education that comes to 56.62 percent to total of 23 individuals. Only 10 number of individuals have given negative response which is 43.38 percent to total respondents. More or less similar is the situation with female children wherein 11 number of individuals [47.83 percent] have given positive response while 12 number of individuals [52.17 percent] have given negative responses. It will not be out of place to clarify the point that elementary education include both primary and middle level education i.e. from classes 1<sup>st</sup> to 8<sup>th</sup> standards. Similarly regarding boys students of secondary level of education i.e. from classes 9<sup>th</sup> to 12<sup>th</sup> standards, the 9 number of individuals [39.13 percent] have informed that their wards attend the school while 14 individuals [60.87 percent] have given a negative response. In case of girl students of secondary level of education only 2 individuals [8.70 percent] have given a positive reply while 21 individuals [91.30 percent] have given a negative response. In case of higher education for both male and female students the response by all the 23 individuals is negative.

4.334 Regarding health status of the control village the following table show the survey results;

	Item	Status of control village [percentage to total respondent of 23]
1	Hiring of services of medical personnel	47.83 [11 individuals]
2	Vaccination of children/pregnant mother	96.65 [22 individuals]
3	Child nutrition	100 [23 individuals]
4	Female nutrition during gestation	100 [23 individuals]
5	Adoption of family welfare measures	82.61 [19 individuals]

4.335 The above table shows a very satisfactory health status particularly in the areas of child nutrition and female nutrition where cent-percent individuals have given a positive response.

4.336 Regarding status of **drinking water facilities**, only one individual has responded positively for availability of piped water supply which seems obvious as in villages this facility is seldom available. Hand pumps are main sources of drinking water in our control village of Manikhedi Kot wherein 22 individuals of the total of 23 individuals have reported for its existence.

4.337 Regarding **houseing facilities**, 11 individuals [47.83 percent to total of 23 individuals] have reported for construction of semi pucca houses while 4 individuals [17.39 percent] have positive response for construction of pucca houses and 5 individuals [21.74 percent] have reported that they have constructed separate cattle shed.

4.338 The following table shows the comparative level of awareness about the various welfare schemes between adopted/cluster villages and control village.

	Name of the scheme	Level of awareness in percentage for adopted/ cluster villages [percent to total of 457 individuals]	Level of awareness in percentage for control village [percent to total of 23 individuals]
1	Jawahar Gram Samridhi Yojna	13.79	0
2	Employment Assurance Scheme	24.07	34.78
3	Establishment of Handloom units	0.22	0
4	Establishment of sericulture units	0.22	0
5	Establishment of family based rural industrial units	1.09	0
6	Mid-day Meals	83.81	34.78
7	Supply of Text Books	42.01	17.39
8	Women Selfhelp Group	83.81	43.48
9	Gramya Yojna	35.23	0
10	Ausmati Yojna	42.01	0

4.339 The above table clearly shows that the level of awareness about various welfare scheme is much higher among the individuals of adopted/cluster group of villages as compared to that of control village.

**4.340 In what follows an attempt has been made to summarise the individual particulars of the control village;**

- **The majority of the individuals ie. 95.65 percent to total of 23 individuals are from the community of Other Backward Classes and the cent-percent individuals are from Hindu religion.**
- **About awareness regarding existence and location of KVK, 78.26 percent and 65.22 percent individuals respectively in control village are aware against the cent-percent level of such awareness in adopted/cluster villages which seems obvious.**
- **Regarding satisfaction level of per hectare yield of agronomical and horticulture product only 4.35 percent individual against the total of 23 individuals are satisfied with the present level of per hectare yield against the level of satisfaction of 96.28 percent individuals in case of adopted/cluster villages.**
- **Regarding satisfaction level of present status of live stock and dairy activities, 2 individuals [8.70 percent to total of 23 individuals] have positive reaction while in case of adopted and cluster villages such satisfaction level is nil.**
- **The satisfaction levels for poultry development for both control village and adopted/cluster villages are nil.**
- **Similar is the case with fishery development where the level of satisfaction for both control and adopted/cluster group of villages is nil.**
- **For augmentation of the income levels, cent percent individuals from control village are in favour of toy making followed by pickle preparation by 82.61 percent individuals, papad, jelly, jam preparation by 56.62 percent individuals, food preservation by 47.83 percent individuals, jute items by 21.74 percent individuals and backing by 13.04 percent of individuals.**

- **Regarding training of rural youth for self employment considerable interests have been shown by the individuals of control villages for activities like motor binding, diesel engine repairs, cycle/scooter repair etc. whereas in case of adopted and cluster villages the main emphasis is for motor binding and engine repair.**
- **Regarding elementary level of education [classes 1<sup>st</sup> to 8<sup>th</sup> standard] 56.62 percent of individuals have reported that their male wards attend the school whereas for female wards 47.83 percent of individuals have reported for their school attendance. In case of higher education for both male and female students the response by all the 23 individuals is negative.**
- **A very satisfactory level of health scenario is existing in the control village where cent-percent individuals have positively responded for child and female nutrition.**
- **Hand pumps are the main source of drinking water in our control village wherein 22 individuals out of 23 individuals have reported for its existence.**
- **Regarding housing facilities the individuals of control village have shown interests in construction of semi-pucca houses, pucca houses and separate cattleshed.**
- **The level of awareness of various welfare schemes initiated by the government is much higher in case of adopted/cluster villages as compared to control village.**

## CHAPTER FIVE

### KRISHI VIGYAN KENDRA - INDORE

- 5.1 The district Indore is located in between 22.20<sup>0</sup> to 23.05<sup>0</sup> north latitude to 72.25<sup>0</sup> to 76.15<sup>0</sup> east longitude with total geographical area of 3898 squ.km. [as per census 2001] which is 1.26 percent to total geographical area of the State.
- 5.2 District Indore being commercial capital of Madhya Pradesh has a small rural expanse, which is evident from the fact that the district has only 645 number of inhabited villages with 304 Gram Panchayats and 4 Janpad Panchayats.
- 5.3 The average annual rainfall of the district is 657 mm concentrated over the months of June to September and mainly received from the monsoon winds coming from Arabean Sea. The average maximum temperature during summer is around 41.6<sup>0</sup> celcius while the average minimum temperature during winter is 9.2<sup>0</sup> celcius.
- 5.4 The total population of the district as per census 2001 is 2465827 persons with rural and urban breakups of 735464 and 1730363 persons respectively which is 29.83 percent and 70.17 percent to total population respectively that denotes the urban character of the district. The percentage of scheduled caste population to total population (as per census 2001) is 15.75 while that of S.T. population is 6.64. The percentage of workers engaged in the occupation of agriculture (as per census 1991) to total workers is 32.07 and for rural population is 36.03 percent that shows that agriculture is not the main stay of the population of Indore district. In the fallowing table a few indicators relating to agriculture has been shown;

Table No. 5.1  
Important Indicators Relating to Agriculture

Sl. No.	Indicators	District Indore	State of Madhya Pradesh
1	2	3	4
1	Percentage of forest area to total geographical area [ha]	13.58	26.65
2	Net cropped area as percent to total geographical area [ha]	66.58	49.02
3	Per-capita net cropped area [ha]	0.11	0.25
4	Per-capita gross cropped area [ha]	0.20	0.34
5	Percentage of double cropped area to net cropped area [ha]	78.43	35.49
6	Net area irrigated as percent to net cropped area [ha]	65.49	37.56
7	Gross area irrigated as percent to gross cropped area [ha]	36.70	28.54
8	Per-capita production of food-grains [Kg.]	145	266
9	Per hectare use of fertilizer [Kg.]	91.60	46.21
10	Gross value of agriculture produce-per hect. [Rs.]	16332	11968
11	Per hectare yield of agriculture produce [Kg.]*		
a)	Paddy	667	1058
b)	Wheat	2698	1867
c)	Jowar	1354	1342
d)	Maize	1525	2072
e)	Gram	920	932
f)	Tuar	658	825
g)	Soybean	1070	1137
12	Electrified villages as percent to total inhabited villages	99.36	97.04
13	Energised pump sets per thousand hectare	97	60

\*Figures relate to the year 2003-2004 [Final Forecast]

- 5.5 One typical feature revealed by the above table is that though the district Indore is ahead of the State in indicators like percentage of double cropped area to net cropped area, gross area irrigated as percent to gross cropped area and per-capita use of fertilizer but regarding yield per hectare of most of the crops the district is lagging behind as compared to State level performance. This paradoxical situation is mainly because of prevailing drought conditions in the district for the last two years consequetively.

#### **DETAILS OF KRISHI VIGYAN KENDRA, INDORE BASED ON THE SECONDARY INFORMATION**

- 5.6 The K.V.K., Indore was established in the year 1976. It is located in the Kasturbagram area of Indore city. It is being run by an N.G.O. headed by Secretary of organisation as chief of the K.V.K., having nine number of technical staff and six number of non-technical staff. The technical staff consists of training associates and farm managers mainly from the disciplines of Agriculture Extension, Agronomy, Agriculture Engineering, Horticulture and Veterinary Science. The farm area of the K.V.K. is 20 hect which is entirely cultivated with irrigated and un-irrigated area of 15 hecets and 5 hecets respectively. The K.V.K. has got no administrative building of its own. The host organisation has provided the building from their own resources.
- 5.7 The K.V.K. has its own demonstration units like dairy unit and nursery, vermi compost and drip irrigation units along with existence of farmers hostel where the cultivators can be accomodated during training courses. Regarding availability of irrigation facilities the K.V.K. has 3 number of wells, 5 number of tube wells, one farm pond and 4 number of electrically operated pump sets, sufficient to irrigate 15 hectares of land. The K.V.K. has also got one four wheeler and one two wheeler to cater to the transportation needs.
- 5.8 The K.V.K. has adequate number of agricultural implements as detailed below;
1. Tractor – 1
  2. M.B. Plough –1
  3. Cultivator – 1
  4. Tractor drawn Ferti seed drill –1
  5. Duck foot harrow – 1

These variety of implements are, more or less, sufficient to do the extension work with reasonable efficiency.

- 5.9 The K.V.K. receives an average allocation of Rs. 22.51 lakh per year over the years 2001-2002 to 2003-2004 against which the average expenditure per year is Rs. 17.06 lakh. The table below shows the details;

Table No. 5.2  
Budget Allocation and Expenditure

*Rs. Lakh*

Sl. No.	Particulars	2001-2002		2002-2003		2003-2004		Remarks
		Alloca- tion	Expen- diture	Alloca- tion	Expen- diture	Alloca- tion	Expen- diture	
1	2	3	4	5	6	7	8	9
<b>1.</b>	<b>RECURRING EXPENDITURE</b>							
a	Pay and Allowances	6.00	1.99	18.00	10.42	18.00	15.25	
b	Travelling Allowances	0.30	0.07	1.00	0.07	0.50	0.36	
c	Contingencies	2.00	1.51	3.00	3.00	3.00	2.81	
	<b>Total – 1</b>	<b>8.30</b>	<b>3.57</b>	<b>22.00</b>	<b>13.49</b>	<b>21.50</b>	<b>18.42</b>	
<b>2.</b>	<b>NON-RECURRING EXPENDITURE</b>							
a	Vehicles	4.00	4.00					
b	Equipment and furniture	-	-	-	-	6.00	5.99	
c	Works	-	-	-	-	4.52	4.52	
d	Farm Development	-	-	1.00	1.00	-	-	
e	Library	-	-	0.10	0.10	0.10	0.09	
	<b>Total 2</b>	<b>4.00</b>	<b>4.00</b>	<b>1.10</b>	<b>1.10</b>	<b>10.62</b>	<b>10.60</b>	
	<b>Grand Total 1+2</b>	<b>12.30</b>	<b>7.57</b>	<b>23.10</b>	<b>14.59</b>	<b>32.12</b>	<b>29.02</b>	

5.10 The above table shows that in every year under report the expenditure has fallen short of allocation which is a trend not much desirable.

5.11 Regarding Technical performance, the information has been collected under following heads;

- Vocational Training
- In-service Training
- Front Line Demonstration
- On Farm Testing.

5.12 In what follows an attempt has been made to present the details of the above mentioned items of technical performance.



## VOCATIONAL TRAINING

5.13 The table below shows the details;

Table No. 5.3  
Status of Vocational Training

Sl. No.	Subject	No. of trainings organised -2003-2004			Total no. of trainees 2003-2004
		Adopted Villages	Cluster Villages	Other Villages	
1	2	3	4	5	6
1	Crop Production	10	5	8	508
2	Horticulture	4	-	3	114
3	Plant Protection	-	-	19	404
4	Veterinary Services	-	-	1	30
5	Home Science	10	-	7	419
6	Ag. Engineering	5	-	1	108
7	Training of Rural Youth for Self Employment				
a.	Crop Production	2	-	1	47
b.	Home Science	2	-	-	46
c.	Ag. Engineering	1	-	-	13
d.	Horticulture	-	-	1	18
	Total	34	5	41	1707

Note : Other villages [Col. 5] indicate those villages of the district where the training programmes of Agriculture. Department are imparted through K.V.K.

5.14 The above table shows that the total number of vocational training organised in the year 2003-2004 was 80 which was, to some extent, satisfactory. **Only 5 number of training courses organised in cluster group of villages in one year is far from being satisfactory. Cluster group of villages are supposed to inculcate the positive effects of training programmes organised in adopted villages through various forward linkages that ultimately help in covering the entire district through spread effects. More number of vocational trainings need to be organised in such villages to keep alive the flow benefits on regular basis.** More numbers of vocational training courses have been organised on subjects like crop production, plant protection, home science and horticulture in both adopted villages and other villages which seem obvious as the farmers are usually interested in enhancing their crop productivity. **More number of vocational training should have been organised on horticulture as this is one of the important fields of quick income generation with availability of ready market. Organisation of 17 number of training programmes on various subjects of home science like pickle preparation, bakery items, preparation of papad/bari/jam/jelly etc is indicative of the fact the female population residing in the villages are keen over augmenting the family income by utilizing their spare time meaningfully. The organisation of only 7 number of training courses to impart training to rural youth for self employment and attended by only 124 persons [7.26% to total trainees] is indicative of the fact that the villagers are not very confident about such trainings which hardly guarantee any placement.**

5.15 The combined percentage of trainees attending subjects like crop production, plant protection and home science to total number of trainees was 77.97 that confirms the fact that farming communities are more interested to enhance their income through adoption of technology particularly in the field of crop production.

## IN SERVICE TRAINING

- 5.16 This training is related to the field functionaries of Agriculture, Veterinary, Horticulture and Forest Departments. The following table shows the details;

Table No. 5.4  
Status of In-service Training

Sl. No.	Subject	No. of trainings 2003-2004		Total number of trainees 2003-2004
		On campus	Off campus	
1	2	3	4	5
1	Crop Production	1	-	21
2	Home Science	1	-	11
3	Horticulture	1	-	13
4	Agriculture Engineering	1	-	12
	Total	4	-	57

- 5.17 Though the number of training programmes conducted in the year 2003-2004 is satisfactory, a few more training programmes particularly for Crop Production and Horticulture would have been more helpful.

## FRONT LINE DEMONSTRATION

- 5.18 Front line demonstrations are conducted under the close supervision of the scientists of the KVK for newly released technologies or those likely to be released in near future with target participants both farmers and extension officers. The table below shows the number of front line demonstrations conducted in the year 2003-2004.

Table No. 5.5  
Status of Front Line Demonstrations

Sl. No.	Subjects	No. of demonstrations 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Pulses	28	-
2	Oil Seeds	25	-
3	Other than pulses and oilseeds	100	-
	Total	153	-

- 5.19 Though total of 153 FLDs organised in adopted villages is satisfactory but the complete absence of any such demonstrations in cluster villages, supposed to form the periphery of adopted villages where the benefits of the positive aspects of adopted villages are supposed to percolate, is some what peculiar that required to be looked after by the K.V.K. authorities immediately.**

## ON FARM TESTING

- 5.20 On farm testing is a part of adaptive research that takes into account existing technology and its application over defined areas and defined group of farmers. The following table shows the details;

Table No. 5.6  
Status of On Farm Testing

Sl. No.	Subject	No. of demonstrations 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Horticulture	5	-
2	Agronomy	10	-
3	Ag. Engineering	10	-
	<b>Total</b>	<b>25</b>	<b>-</b>

- 5.21 Organisation of only 25 number of on farm testing in one year that too only in adopted villages is not an encouraging picture that required to be increased covering cluster villages as well. The K.V.K. authorities may look into the matter immediately.
- 5.22 Besides organizing training courses on Vocational Training, In Service training, Front Line Demonstration and On Farm Testing the K.V.K., Indore has also organised other training programmes in liaison with the line departments of State Government. The table below shows the details;

Table No. 5.7  
Record of Other Training Courses

Sl. No.	Topic	Year 2003-2004	
		Duration – Days	No. of Participants
1	2	3	4
1	Storage of Food Grains	3	60
2	Vermi Compost	3	60
3	Water Conservation	3	60
4	NADEP	3	60
5	Medicinal Crop Cultivation	3	60
6	SHG Activities	1	25
	<b>Total</b>	<b>-</b>	<b>325</b>

- 5.23 The above table shows that most of the training courses organised were related to crop production and storage which seem obvious as the cultivators are usually interested in enhancement of agriculture production. A few number of trainings relating to home science and training of rural youth for self employment could have been organised which would have made such efforts more meaningful. However, it has also been felt that every training programme should have a minimum duration of 4 days to ensure purposeful transaction as about half of the day in case of most of such meetings is usually lost in observing formalities.
- 5.24 One of the important functions of the K.V.K. is to conduct specific research to improve the quality of agriculture produce. The K.V.K., Indore has conducted one specific research, the details of which are given below;

Table No. 5.8  
Status of Specific Research

1	Topic of Research	Year	Impact Over			
			Production	Pest Control	Improved Animal Breed	Others [Specify]
1	2	3	4	5	6	7
1	Inter-cropping of Merigold and Soybean	2003 [Kharif]	Increase	Decrease	-	-

- 5.25 The above information is not impressive. The K.V.K. should have quantified the impact that shows the per-factory nature of effort.
- 5.26 Each K.V.K. is supposed to hold the meeting of Scientific Advisory Committee twice in a year for performing following functions;
- 5.27 The Scientific Advisory Committee will consist of following members;
- |     |  |                  |
|-----|--|------------------|
| 1.  | Head of the host institution   | Chairperson      |
| 2.  | Director, Extension of concerned SAU   | Member           |
| 3.  | Zonal Coordinator of the concerned zone  | Member           |
| 4.  | Representative of ICAR Instt./ICAR Regional Research Station if located in the district or nearby  | Member           |
| 5.  | Associate Director, Research & Extension of the Zonal Research Station in which KVK is located   | Member           |
| 6.  | District officers of the line departments such as Agriculture, Horticulture, Animal Husbandry, Soil conservation, Social/Agroforestry, Sericulture, Fisheries, Irrigation, Social Welfare, Small Scale Industries etc. | Members          |
| 7.  | Representative of the Lead Bank of the District  | Member           |
| 8.  | Farm Radio Officer of the AIR in which KVK is located  | Member           |
| 9.  | Representative of Doordarshan Centre in which KVK is located   | Member           |
| 10. | Two representatives of the farmers - one small and one big nominated by the Head of the Institution  | Member           |
| 11. | Two representatives of Farm Women nominated by Head of the Institution   | Members          |
| 12. | Training Organiser, KVK  | Member Secretary |
- 5.28 During the years 2002-2003 and 2003-2004, the K.V.K., Indore **has not** organised any meeting of the Scientific Advisory Committee on the grounds that the members do not give time and slackness on the part of the K.V.K. The situation is very unfortunate. The Zonal Coordination Office may please look into the matter as these meetings are important to monitor the activities of the K.V.K. at certain point of time.
- 5.29 The K.V.K., Indore has continuously interacted with district administration, three-tier system of Panchayati Raj Institutions and progressive cultivators of the district and took valuable guidance from them. Publicity measures like organizing Krishi Melas, Field Days, use of Audio-Visual Aids, arranging T.V. Interviews and Radio talks were attempted to spread the knowledge about utility of K.V.K. among rural population.

## RESULTS OF THE SURVEY – VILLAGE PARTICULARS

5.30 The study has covered sixty number of villages with ten number of villages from each K.V.K. with bifurcation as follows;

- Three number of Adopted Villages
- Six number of Cluster Villages
- One number of Control Village

The bifurcation as shown above is common to all the six K.V.Ks. covered under the study. The table below gives a few important demographic details of the selected villages of K.V.K., Indore;

Table No. 5.9  
Demographic Particulars

Sl. No.	Name of the Village	No. of households as on date the survey	Total population Census 2001	Of which		Proportion of S.C. population [%]	Proportion of S.T. population [%]	Literacy rate [%]	Household size
				Males Census 2001	Females Census 2001				
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Mali Badodia	79	515	279	236	7.6	29.3	41.1	5
2	Indira Gram	47	338	177	161	9.2	0.0	45.5	6
3	Gaginda	103	1168	581	587	11.1	81.0	37.9	6
	<b>Total – I</b>	<b>229</b>	<b>2021</b> [32.92]	<b>1037</b> [32.67]	<b>984</b> [33.19]	-	-	-	-
<b>CLUSTER VILLAGES</b>									
4	Phool Karari	77	536	261	275	12.7	17.4	47.4	5
5	Bari Kalmer	92	435	226	209	21.8	0.0	46.7	6
6	Jagjivan Gram	51	274	149	125	3.3	0.7	40.9	6
7	Nehru Van Gram	52	332	170	162	13.6	0.0	48.8	6
8	Sendal	125	736	385	351	5.4	67.9	39.9	6
9	Mendal	166	874	459	415	0.0	99.4	24.5	6
	<b>Total – II</b>	<b>563</b>	<b>3187</b> [51.91]	<b>1650</b> [51.98]	<b>1537</b> [51.84]	-	-	-	-
<b>CONTROL VILLAGE</b>									
10	Bercha	69	931	487	444	37.5	16.8	57.8	6
	<b>Total – III</b>	<b>69</b>	<b>931</b> [15.17]	<b>487</b> [15.35]	<b>444</b> [14.97]	-	-	-	-
	<b>Grand Total I+II+III</b>	<b>861</b>	<b>6139</b> [100]	<b>3174</b> [100]	<b>2965</b> [100]	-	-	-	-

Source – Census 2001

Note – Figures in brackets show percentage to total.

5.31 The total population of the ten identified villages as per census – 2001 is 6139 which is 0.84 percent of the total rural population of district Indore. The adopted villages cover 32.92 percent population as compared to total population of ten identified villages covered under the study while for the cluster villages this percentage is 51.91 to the total population of ten villages and for control village the percentage coverage of population is 15.17. The largest village, population wise is Gaginda [adopted village] while the smallest village is Jagjivan Gram [Cluster Village]. Except for the villages

Gaginda and Phool Karari where the female population is more than male population, in rest of the villages a reverse trend is visible. In villages like Indira Gram [adopted village], Bari Kalmer [Cluster Village], Jagjivan Gram [Cluster village] and Nehru van gram [Cluster village] the per-centage of S.C. population is more than that of S.T. population while in rest of villages a reverse trend is prevailing. The literacy rate that ranged between 24.5 percent for village Mendal – a predominantly tribal village to 57.8 percent for village Bercha [Control village] is lower than both district and State level percentage literacy of 74.82 and 64.08 respectively. The average size of the household is 6 persons for most of the villages except for the villages like Mali Badodia and Phool Karari where the average size of the household is 5 persons.

## WORK FORCE

5.32 An analysis of the information regarding workforce for all the ten villages covered under the study will give an idea of the persons engaged in different occupation and also the magnitude of dependent population not pursuing any occupation. The table below shows the details;

Table No. 5.10  
Status of Work Participation

Sl. No	Name of the Village	Work participation rate [%]			Proportion of main workers [%]			Proportion of Marginal workers [%]			Proportion of Non-workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Mali Badodia	48.7	55.6	40.7	40.0	54.1	23.3	8.7	1.4	17.4	51.3	44.4	59.3
2	Indira Gram	45.9	44.6	47.2	23.1	40.1	4.3	22.8	4.5	42.9	54.1	55.4	52.8
3	Gaginda	52.8	54.6	51.1	31.3	40.8	22.0	21.5	13.8	29.1	47.2	45.4	48.9
<b>CLUSTER VILLAGES</b>													
4	Phool Karari	56.0	58.6	53.5	26.7	30.7	22.9	29.3	28.0	30.5	44.0	41.4	46.5
5	Bari Kalmer	61.4	61.5	61.2	49.4	57.5	40.7	12.0	4.0	20.6	38.6	38.5	38.8
6	Jag Jeevan Gram	44.9	52.3	36.0	29.2	41.6	14.4	15.7	10.7	21.6	55.1	47.7	64.0
7	Nehru Van Gram	56.0	58.2	53.7	55.1	57.1	53.1	0.9	1.2	0.6	44.0	41.8	46.3
8	Sendal	51.4	52.7	49.9	42.5	49.1	35.3	8.8	3.6	14.5	48.6	47.3	50.1
9	Mendal	53.5	53.2	54.0	41.6	41.8	41.4	11.9	11.3	12.5	46.5	46.8	46.0
<b>CONTROL VILLAGE</b>													
10	Bercha	56.0	54.6	57.4	56.0	54.6	57.4	0.0	0.0	0.0	44.0	45.4	42.6

Source – Census 2001

5.33 The above table shows that the work participation rate ranged between 44.9% for village Jag Jeevan Gram [Cluster village] to 61.4% for village Bari Kalmer [cluster village] with similar participation rate between male and female which is positive indication indicating awareness and intent of the female population, residing in our sample area to contribute meaningfully towards household income. The proportion of main workers which is, in general, higher than the porportion of marginal workers, ranged between 23.1 percent for village Indira Gram [adopted village] to 56.0 percent for village Bercha [control village]. In cent percent sample villages the male participation as main workers is higher than female participation while a reverse situation is seen in case of marginal workers where female participation is higher than male participation. This shows that in our sample area of study avenues of activities other than agriculture like preparation of papad/bari/jelly, toy making etc are available with ready market at Indore city that employes substantial number of rural female population.

The results of the survey will also justify this fact. The proportion of non-workers that ranged between 38.6 percent for village Bari Kalmer [cluster village] to 55.1 percent for village Jag Jeevan Gram [cluster village] presents a dismal picture as it shows the higher number of dependent population consisting mainly of children, old persons, infirms and unemployed who are not in position to contribute much towards family income.

## OCCUPATIONAL DISTRIBUTION

5.34 The table below shows the details;

Table No. 5.11  
Occupational Distribution

Sl. No	Name of the Village	Proportion of Cultivators to total Workers [%]			Proportion of Agr. Labourer to total workers [%]			Proportion of workers in household industries to total workers [%]			Proportion of other workers to total workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Mali Badodia	28.3	29.0	27.1	39.0	23.9	63.5	1.6	2.6	0.0	31.1	44.5	9.4
2	Indira Gram	56.1	46.8	65.8	31.6	29.1	34.2	0.6	1.3	0.0	11.6	22.8	0.0
3	Gaginda	36.8	40.1	33.3	56.9	50.2	64.0	0.6	0.6	0.7	5.7	9.1	2.0
<b>CLUSTER VILLAGES</b>													
4	Phool Karari	39.7	39.5	39.5	52.0	46.4	57.8	6.3	9.8	2.7	2.0	3.9	0.0
5	Bari Kalmer	73.8	70.5	77.3	19.5	17.3	21.9	0.4	0.7	0.0	6.4	11.5	0.8
6	Jag Jeevan Gram	33.3	35.9	28.9	50.4	42.3	64.4	0.8	1.3	0.0	15.4	20.5	6.7
7	Nehru Van Gram	57.5	55.6	59.8	39.2	39.4	39.1	0.0	0.0	0.0	3.2	5.1	1.1
8	Sendal	35.2	34.5	36.0	52.1	46.8	58.3	1.9	2.0	1.7	10.8	16.7	4.0
9	Mendal	71.2	68.4	74.1	18.2	17.2	19.2	0.0	0.0	0.0	10.7	14.3	6.7
<b>CONTROL VILLAGE</b>													
10	Bercha	12.7	11.3	14.1	73.9	66.2	82.0	0.4	0.0	0.8	13.1	22.6	3.1

Source – Census 2001

5.35 Agriculture remains to be the main occupation of the ten villages identified for the study. The proportion of cultivators to the total workers ranged between 12.7 percent for village Bercha [control village] to 73.8 percent for village Bari Kalmer [cluster village]. **Usually these percentages are fairly high among adopted and cluster villages that justify the selection of such villages in the group of adopted and cluster.** Out of ten villages, in six number of villages viz. Indira Gram [adopted village], Bari Kalmer [cluster village], Nehru Van Gram [cluster village] Mendal [cluster village] and Bercha [control village] the proportion of female cultivators is more than that of male cultivators that signifies the awareness and intent of the female members of the farming community to work along with their male counterpart for addition in household income. The trend matches with the modern expectations of equality of gender participation in work that, besides, income augmentation, ensures women empowerment to a great extent. Another significant fact revealed by the above table is that in case of villages like Indira Gram [adopted village], Bari Kalmer [cluster village] Nehru Van Gram [cluster village] and Mendal [cluster village] the proportion of cultivators is more than that of agriculture labour which is a sure indication that in these villages the occupation of agriculture is being pursued fairly satisfactorily.

5.36 Regarding proportion of agriculture labour to total workers, that ranged between 18.2 percent for village Mendal [cluster village] to 73.9 percent for village Bercha [control

village], the involvement of female participation is more than that of males that indicates the performance of odd jobs regarding farming by women folk of our sample area.

5.37 The situation regarding proportion of workers in household industries to total workers is far from being satisfactory as it ranged between 0.4 percent for villages Bari Kalmer [cluster village] and Bercha [control village] to 6.3 percent for village Phool Karari [cluster village]. In villages like Nehru Van Gram and Mendal [both cluster villages] such secondary sector activity is practically missing. Usually in Madhya Pradesh the status of secondary sector occupation in villages is poor. One of the important factors of rural poverty is absence of such occupations that encourage migration during lean season of agriculture. Such sort of secondary occupation may be encouraged through proper implementation of various welfare schemes, particularly relating to rural development, being run by the government.

5.38 Except for the village Mali Badodia [adopted village] is rest of the villages, the proportion of other workers to total workers is far below than the proportion of cultivators and agriculture labour to total workers with preponderance of male participation as compared to female participation.

### LAND USE DETAILS

5.39 The table below shows the land use details of the identified ten villages covered under the study;

Table No. 5.12  
Land Use Details

Sl. No.	Name of the Village	Total geographical area	Gross cropped area	Forest	Not available for cultivation	Cultivable waste	Irrigation				Total irrigated area	Unirrigated
							Canal	Pond	Wells	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Mali Badodia	181	173 [95.58]	0	8	25	0	0	36	100	136 [78.61]	12
2	Indira Gram	234	226 [96.58]	0	8	16	0	0	0	108	108 [47.19]	102
3	Gaginda	296	285 [96.28]	0	11	10	0	0	14	18	32 [11.23]	243
<b>Adopted Village I</b>		711	684 [96.20]	0	27	51	0	0	50	226	276 [40.35]	357
4	Phool Karari	518	507 [97.88]	0	11	44	0	0	0	343	343 [67.65]	120
5	Bari Kalmer	300	281 [93.67]	0	19	26	0	0	0	206	206 [73.31]	49
6	Jagjeewan Gram	190	178 [93.68]	0	12	32	0	0	0	92	92 [51.69]	54
7	Nehru Van Gram	193	186 [96.37]	0	7	24	0	0	0	86	86 [46.24]	76
8	Sendal	305	174 [57.05]	128	3	0	0	0	51	65	116 [66.67]	58
9	Mendal	121	95 [78.51]	16	10	0	0	0	31	35	66 [69.47]	29
<b>Cluster Village II</b>		1627	1421 [87.34]	144	62	126	0	0	82	827	909 [63.97]	386
10	Bercha	564	327 [57.98]	19	218	193	67	0	30	37	134 [40.98]	0
<b>Control Village III</b>		564	327 [57.98]	19	218	193	67	0	30	37	134 [40.98]	0
<b>Total – I+II+III</b>		2902	2432 [83.80]	163	307	370	67	0	162	1090	1319[54.23]	743

Source – Census, 2001

Note – Col. –4 = Figures in brackets show percentage to total geographical area.

Col. – 12 = Figures in brackets show percentage to gross cropped area.

5.40 The gross cropped area of the identified ten villages is 83.80 percent to total geographical area that confirms the fact that the main occupation of these villages is agriculture. The survey area is not rich in forest resources as the total area under forest is 5.62 percent to total geographical area of the ten identified villages.

5.41 Regarding irrigation, the percentage of gross irrigated area to gross cropped area is 54.23 which is more than the district average of 36.70 percent and state average of 28.54



**percent.** In adopted three villages this figure ranged between 11.23 percent in village Gaginda to 78.61 percent in village Mali Badodia whereas in cluster villages this range is 46.24 percent in village Nehru Van Gram to 73.31 percent for village Bari – Kalmer. The overall status of irrigation is quite satisfactory in all the ten identified villages covered under the study.

- 5.42 Cultivable waste land, that provides promise for expanding agriculture activities, is 370 hectares in identified ten number of villages which is 12.75 percent to total geographical area, **assuring a fact that through the intervention of K.V.K. the expansion of agriculture is possible through implementation of various agriculture related technology.**

## RURAL ELECTRIFICATION

- 5.43 Rural electrification is one of the important parameters for agricultural development, particularly in the context of energisation of pump sets. The table below shows the details;

Table No. 5.13  
Status of Rural Electrification

Sr. No.	Name of the village	Village Electrified		Regular supply		If irregular supply actual hrs. of supply
		Yes	No	Yes	No	
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)*	1			1	18
2.	Indira Gram (Mahu)	1			1	18
3.	Gaginda (Mahu)	1			1	16
	<b>Adopted Village</b>	3			3	
4.	Phool Karari (Indore)	1			1	18
5.	Bari Kalmer (Indore)	1			1	18
6.	Jag Jeewan Gram (Mahu)	1			1	18
7.	Nehru Van Gram (Mahu)	1			1	18
8.	Sendal (Mahu)	1			1	18
9.	Mendal (Mahu)	1			1	13
	<b>Cluster Village</b>	6			6	
10	Bercha (Mahu)	1			1	18
	<b>Control Village</b>	1			1	
	<b>Total</b>	10			10	

\*The information in brackets shows the name of the Development Block where the village is located. This information will be common to all the subsequent tables.

- 5.44 All the villages covered under the study are electrified with irregular power supply situations. The power supply for most of the villages is 18 hours a day which seems satisfactory in view of overall power shortage situation in the state.
- 5.45 Energisation of pump sets is the direct impact of rural electrification over agriculture development. The table below shows the extent of energisation of pump sets in our sample area of study;

Table No. 5.14  
Status of Pump Sets Energised

Sr. No.	Name of the village	Pump sets energized	
		Electricity (No.)	Diesel (No.)
1	2	3	4
1.	Mali Badodia (Indore)	150	0
2.	Indira Gram (Mahu)	18	0
3.	Gaginda (Mahu)	55	2
	<b>Adopted Village</b>	223	2
4.	Phool Karari (Indore)	96	10
5.	Bari Kalmer (Indore)	160	5
6.	Jag Jeewan Gram (Mahu)	20	0
7.	Nehru Van Gram (Mahu)	20	0
8.	Sendal (Mahu)	100	5
9.	Mendal (Mahu)	100	3
	<b>Cluster Village</b>	496	23
10	Bercha (Mahu)	10	0
	<b>Control Village</b>	10	0
	<b>Total</b>	729	25

5.46 The total number of pump sets energized is 754 which is 1.71 percent to total number of 44132 pump sets energized in district Indore in the year 1999-2000. It may be mentioned here that for district Indore the number of energized pump sets per thousand hectare of gross cropped area is 97 as against the State average of 60 that shows the viable nature of agriculture in the district. **In general, the number of pump sets energized is more in adopted and cluster group of villages as compared to control village which rather, is obvious as these villages have direct intervention of K.V.K. regarding technology transfer for better cultivation practices.** Electrically energized number of pump sets are much more than that of pump sets energized by use of diesel that ranged between 10 numbers in village Bercha [control village] to 160 numbers in village Bari kalmer [cluster village].

#### HOUSEHOLD INDUSTRIAL UNITS

5.47 **The complete absence of the existence of household industrial units in the sample area of our study is not very peculiar as such units are generally not found in rural areas of Madhya Pradesh which is one of the important contributory factors of rural poverty. Since agriculture as occupation is quite developed in district Indore with better road connectivities the opening of agro-based rural industrial units may be considered.**

## COOPERATIVES

5.48 The table below shows the details;

Table No. 5.15  
Cooperative Societies

In number

Sr. No.	Name of the village	Agriculture co-operative credit society	Fishermen co-operative society	Milk co-operative society	Co-operative. marketing society	Others specify
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	0	0	0	0	0
2.	Indira Gram (Mahu)	0	0	0	0	1
3.	Gaginda (Mahu)	1	1	1	1	1
	<b>Adopted Village</b>	1	1	1	1	2
4.	Phool Karari (Indore)	0	1	0	0	0
5.	Bari Kalmer (Indore)	1	0	0	1	0
6.	Jag Jeewan Gram (Mahu)	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	0	0	0	0	0
8.	Sendal (Mahu)	1	0	0	0	0
9.	Mendal (Mahu)	0	0	0	0	0
	<b>Cluster Village</b>	2	1	0	1	0
10	Bercha (Mahu)	0	0	0	0	0
	<b>Control Village</b>	0	0	0	0	0
	<b>Total</b>	3	2	1	2	2

**5.49 Total of 10 cooperative societies are existing in our area of study as on the date of survey, evenly distributed between adopted and cluster villages with no such societies functioning in control village i.e. Bercha.**

**5.50** The existence of various basic and infrastructural facilities is important from the angel of absorption capacity of technology of any sort in identified areas to gurantee future chain of development. In the subsequent paragraphs an attempt has been made to present such inventories for sample villages covered under the study.

## BASIC FACILITIES

5.51 The table below shows the details;

Table No. 5.16  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	District head quarter away from the village KM	Tahsil head-quarter		Block head quarter	
			within the village 0 KM	Away from the village Km	within the village 0 KM	Away from the village Km
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	16		16		16
2.	Indira Gram (Mahu)	25		18		18
3.	Gaginda (Mahu)	33		25		25
	<b>Adopted Village</b>					
4.	Phool Karari (Indore)	22		20		20
5.	Bari Kalmer (Indore)	14		14		14
6.	Jag Jeewan Gram (Mahu)	25		18		18
7.	Nehru Van Gram (Mahu)	15		4		9
8.	Sendal (Mahu)	38		38		38
9.	Mendal (Mahu)	40		40		40
	<b>Cluster Village</b>					
10	Bercha (Mahu)	28		28		28
	<b>Control Village</b>					
	<b>Total</b>	10	0	10	0	10

Table No. 5.16 [Contd...]  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	Gram Panchayat		Police Station/sub station	
		within the village 0 KM	Away from the village Km	within the village 0 KM	Away from the village Km
1	2	8	9	10	11
1.	Mali Badodia (Indore)		2		8
2.	Indira Gram (Mahu)		5		5
3.	Gaginda (Mahu)		3		13
	<b>Adopted Village</b>				
4.	Phool Karari (Indore)		3		3
5.	Bari Kalmer (Indore)	0			8
6.	Jag Jeewan Gram (Mahu)		6		5
7.	Nehru Van Gram (Mahu)		2		5
8.	Sendal (Mahu)		4		14
9.	Mendal (Mahu)		3		18
	<b>Cluster Village</b>				
10	Bercha (Mahu)		5		12
	<b>Control Village</b>				
	<b>Total</b>	1	9		10

5.52 The above table shows the location of district, tahsil and block headquarters quite far away from most of the sample villages. The location of Gram Panchayat within or close to the sample villages is a positive factor that, to some extent, guarantees involvement of villagers in the development of their area. Though in non of the villages police stations are located within the geographical area of the village but within the manageable distance.

## INFRASTRUCTURAL FACILITIES - ROADS

5.53 For the socio-economic development of any area the role of availability of proper road network is very important. The table below shows the status of availability of road network in and around the identified ten villages;

Table No. 5.17  
Road Infrastructure

Sr. No.	Name of the village	Fair weather road		Kharanja road within the village 0 km
		Within the village 0 Km	Away from the village Km	
1	2	3	4	5
1.	Mali Badodia (Indore)		2	0
2.	Indira Gram (Mahu)		6	0
3.	Gaginda (Mahu)		9	0
	<b>Adopted Village</b>			
4.	Phool Karari (Indore)		9	0
5.	Bari Kalmer (Indore)		9	0
6.	Jag Jeewan Gram (Mahu)		13	0
7.	Nehru Van Gram (Mahu)		13	0
8.	Sendal (Mahu)		13	0
9.	Mendal (Mahu)		13	0
	<b>Cluster Village</b>			
10	Bercha (Mahu)		16	0
	<b>Control Village</b>			
	<b>Total</b>		10	10

Table No. 5.17 [Contd...]  
Road Infrastructure

Sr. No.	Name of the village	Link road to all weather road		All weather road	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	6	7	8	9
1.	Mali Badodia (Indore)		2		2
2.	Indira Gram (Mahu)		4		4
3.	Gaginda (Mahu)		3		3
	<b>Adopted Village</b>				
4.	Phool Karari (Indore)		3		3
5.	Bari Kalmer (Indore)	0		0	
6.	Jag Jeewan Gram (Mahu)		4		4
7.	Nehru Van Gram (Mahu)	0		0	
8.	Sendal (Mahu)		5		10
9.	Mendal (Mahu)	0			3
	<b>Cluster Village</b>				
10	Bercha (Mahu)		3		3
	<b>Control Village</b>				
	<b>Total</b>	3	7	2	8

5.54 Information contained in the above table reveals a **not very satisfactory situation as in non of the villages even fair weather roads exist. Though Kharanja roads are available within all the sample villages that ensure convenient transport in rainy season within the village with reasonable clean sanitary conditions but absence of link roads in seven villages is a definite draw back that deters the development of activities like animal husbandry and poultry or other such perishable items that require road linkages.** One of the basic reasons for the status of backwardness regarding animal husbandry activities is the absence of road linkages in rural areas. Though the distances of link roads and all weather roads are within the easy reach for most of the villages but in rainy season such destinations become inaccessible leading to so many inconveniences. Moreover, absence of proper road infrastructure abstains the officials to reach such villages that results in perpetual neglect of such areas.

Infrastructural Facilities - Railway Station, Bus Stand/Bus Stop/  
Post Office/S.T.D. Booth

5.55 The table shows the details;

Table No. 5.18  
Facilities Regarding Railway Station/Bus Stand/Bus Stop/Post Office/STD Booths

Sr. No.	Name of the village	Railway station		Bus stand/Bus stop	
		within the village 0 Km	Away from the village Km	within the village 0 Km	Away from the village Km
1	2	3	4	5	6
1.	Mali Badodia (Indore)		16		2
2.	Indira Gram (Mahu)		25		4
3.	Gaginda (Mahu)		25		3
	<b>Adopted Village</b>				
4.	Phool Karari (Indore)		20		1
5.	Bari Kalmer (Indore)		16	0	
6.	Jag Jeewan Gram (Mahu)		25		4
7.	Nehru Van Gram (Mahu)		15		3
8.	Sendal (Mahu)		38		10
9.	Mendal (Mahu)		40		10
	<b>Cluster Village</b>				
10	Bercha (Mahu)		28		3
	<b>Control Village</b>				
	<b>Total</b>		10	1	9

Table No. 5.18 [Contd...]

## Facilities Regarding Railway Station/Bus Stand/Bus Stop/Post Office/STD Booths

Sr. No.	Name of the village	Post office		STD booth	
		within the village 0 Km	Away from the village Km	within the village 0 Km	Away from the village Km
1	2	7	8	9	10
1.	Mali Badodia (Indore)		2		2
2.	Indira Gram (Mahu)		5		5
3.	Gaginda (Mahu)		3		3
	<b>Adopted Village</b>				
4.	Phool Karari (Indore)		3		3
5.	Bari Kalmer (Indore)	0		0	
6.	Jag Jeewan Gram (Mahu)		5		5
7.	Nehru Van Gram (Mahu)		3		2
8.	Sendal (Mahu)		8		8
9.	Mendal (Mahu)		10		10
	<b>Cluster Village</b>				
10	Bercha (Mahu)		7		12
	<b>Control Village</b>				
	<b>Total</b>	1	9	1	9

5.56 For all the ten sample villages the **railway station** is located far away from the village that ranged between 16 kms for villages Mali Badodia [adopted village] and Bari Kalmer [cluster village] to 40 kms for village Mendal [cluster village]. In one village i.e. Bari Kalmer [cluster village] the **bus stand/bus stop** is located within the village and in rest of 9 villages this facility is mostly located within the easy reach of the villagers. Similar is the situation with the availability of the facilities regarding post office and STD booth. Bari Kalmer is again the village where the facility of post office and STD booth is available within the physical boundry of the village.

**Infrastructural Facilities - Agriculture Marketing, Fair Price Shop, Cold Storage**

5.57 Mandi or Sub Mandi being regulated markets are important destinations for fair transaction of agriculture produce. The cold storage is yet another important asset that helps in avoiding distress selling. The table below shows the details;

Table No. 5.19  
Agriculture Marketing, Fair Price Shop, Cold Storage

Sr. No.	Name of the village	Regular market		Weekly market		Mandi	
		within the village 0 Km	Away from the village Km	within the village 0 Km	Away from the village Km	within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)		7		7		16
2.	Indira Gram (Mahu)		5		5		18
3.	Gaginda (Mahu)		10		10		25
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)		3		3		20
5.	Bari Kalmer (Indore)		3		3		14
6.	Jag Jeewan Gram (Mahu)		5		5		18
7.	Nehru Van Gram (Mahu)		5		5		15
8.	Sendal (Mahu)		16		16		16
9.	Mendal (Mahu)		18		18		25
	<b>Cluster Village</b>						
10	Bercha (Mahu)		12		12		28
	<b>Control Village</b>						
	<b>Total</b>		10		10		10

Table No. 5.19 [Contd...]  
Agriculture Marketing, Fair Price Shop, Cold Storage

Sr. No.	Name of the village	Sub-Mandi		Fair Price Shop		Cold Storage	
		within the village 0 Km	Away from the village Km	within the village 0 Km	Away from the village Km	within the village 0 Km	Away from the village Km
1	2	9	10	11	12	13	14
1.	Mali Badodia (Indore)		16		2		16
2.	Indira Gram (Mahu)		17		5		10
3.	Gaginda (Mahu)		25		3		15
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)		20		3		3
5.	Bari Kalmer (Indore)		14		20		14
6.	Jag Jeewan Gram (Mahu)		18		5		11
7.	Nehru Van Gram (Mahu)		15		2		10
8.	Sendal (Mahu)		16		1		38
9.	Mendal (Mahu)		25		3		40
	<b>Cluster Village</b>						
10	Bercha (Mahu)		28		7		7
	<b>Control Village</b>						
	<b>Total</b>		10		10		10



5.58 In non of the identified ten villages covered under the study any of the facilities as shown in the above table exist within geographical limits of the village, which undoubtedly is a definite draw back. Except for a few villages regular markets and weekly markets are available within the easy reach of the villagers. Mandies, Sub Mandies and cold storage facilities are usually located far away from the village. **The absence of any fair price shop** [though at a distance of easy accessibility except for village Bari Kalmer [cluster village] where this facility is located 20 kms away from the village] is no doubt a negative exception. The district administration may sort out this problem.

#### AGRO BASED INDUSTRIAL UNITS

5.59 The table below shows the details;

5.60 Agro-based industries are important as they generate employment opportunities in rural areas. The table below shows the status of agro-based industries in our area of study;

Table No. 5.20  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Flour mill		Oil mill		Dal mill	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)		2		7		16
2.	Indira Gram (Mahu)		1		5		18
3.	Gaginda (Mahu)	0			3		25
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)	0			20		20
5.	Bari Kalmer (Indore)		7		14		14
6.	Jag Jeewan Gram (Mahu)		2		5		18
7.	Nehru Van Gram (Mahu)		2		15		15
8.	Sendal (Mahu)	0			38		38
9.	Mendal (Mahu)	0			40		40
	<b>Cluster Village</b>						
10	Bercha (Mahu)		3		28		28
	<b>Control Village</b>						
	<b>Total</b>	4	6		10		10

Table No. 5.21  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Saw mill		Repair of Agr. implements	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12
1.	Mali Badodia (Indore)		16		8
2.	Indira Gram (Mahu)		18		4
3.	Gaginda (Mahu)		25		4
	<b>Adopted Village</b>				
4.	Phool Karari (Indore)		10		3
5.	Bari Kalmer (Indore)		14		8
6.	Jag Jeewan Gram (Mahu)		18		5
7.	Nehru Van Gram(Mahu)		10		2
8.	Sendal (Mahu)		38		8
9.	Mendal (Mahu)		40		10
	<b>Cluster Village</b>				
10	Bercha (Mahu)		28		12
	<b>Control Village</b>				
	<b>Total</b>		10		10

5.61 The above table shows that out of 10 number of villages, **flour mills** are located within the physical boundaries of 4 number of villages while in rest of 6 villages this facility is located within the easy reach of the villagers except for village Bari Kalmer [Cluster village] where this facility is located 7 kms away from the village. In non of the villages, oil mills, dal mills and saw mills are located within the easy reach of the villagers [except in few marginal cases where the distance is not much]. The non-existence of any unit of repair of agricultural implements is a drawback as the inhabitants of these villages are pursuing agriculture as main occupation.

## **SOCIAL INPUTS – EDUCATION**

### **ELEMENTARY EDUCATION – PRIMARY LEVEL**

5.62 The Universalisation of Elementary Education Programme [U.E.E.] which envisages compulsory enrolment of children upto the age of 14 years of age has become popular in Madhya Pradesh. The table below shows the details of primary level of education in our area of study.

Table No. 5.22  
Status of Primary Level of Education

Sr. No.	Name of the village	Primary School					Non formal education	
		Within the village 0 km	with- in 1 km	with- in 2 km	with- in 3 km	> 3 km	Within the village 0 km	Away from the village km
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	0						2
2.	Indira Gram (Mahu)	0						2
3.	Gaginda (Mahu)	0						3
	<b>Adopted Village</b>							
4.	Phool Karari (Indore)	0						2
5.	Bari Kalmer (Indore)	0						2
6.	Jag Jeewan Gram (Mahu)	0						8
7.	Nehru Van Gram (Mahu)	0						2
8.	Sendal (Mahu)	0						2
9.	Mendal (Mahu)	0						15
	<b>Cluster Village</b>							
10	Bercha (Mahu)	0						3
	<b>Control Village</b>							
	<b>Total</b>	10						10

**5.63 One positive fact revealed by the above table is the existence of primary schools within the geographical limits of all the ten number of villages covered under the study that contributed for higher levels of literacy rate within the sample area.** Non formal education centres meant for working children who can not attend the regular primary institutions are not existing within the sample villages but within its manageable distance.

#### ELEMENTARY EDUCATION–MIDDLE LEVEL AND ADULT EDUCATION

5.64 The table below shows the status of middle level and adult education.

Table No. 5.23  
Status of Middle Level and Adult Education

Sr. No.	Name of the village	Middle School			Adult Education			
		In the village 0 km	within 5 km	more than 5 km	within 1 km	within 2 km	within 3 km	> 3 km
1	2	9	10	11	11	12	13	14
1.	Mali Badodia (Indore)		5					16
2.	Indira Gram (Mahu)		5					5
3.	Gaginda (Mahu)	0						10
	<b>Adopted Village</b>							
4.	Phool Karari (Indore)	0						4
5.	Bari Kalmer (Indore)	0						14
6.	Jag Jeewan Gram (Mahu)		5					18
7.	Nehru Van Gram (Mahu)		2				3	
8.	Sendal (Mahu)	0						7
9.	Mendal (Mahu)	0						15
	<b>Cluster Village</b>							
10	Bercha (Mahu)		3					10
	<b>Control Village</b>							
	<b>Total</b>	5	5				1	9

5.65 The above table shows the location of middle school within the geographical limits of five number of villages, all in adopted and cluster villages. Since the criterion of the accessibility of middle school is 3 kms, the seven number of villages are therefore within the laid down criterion which is an encouraging picture. **In none of the villages the adult education centres exist.**

## SECONDARY LEVEL EDUCATION

5.66 The policy relating to secondary education implies extension of school system in unserved areas, consolidating existing facilities and providing special arrangements for talented students. In view of above policy decisions the table below shows the details;

Table No. 5.24  
Status of Secondary Level Education

Sr. No.	Name of the village	High School			Higher School (+2)		
		In the village 0 km	within 5 km	more than 5 km	In the village 0 km	within 5 km	more than 5 km
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)		5			5	
2.	Indira Gram (Mahu)		5			5	
3.	Gaginda (Mahu)			11			11
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)		3			3	
5.	Bari Kalmer (Indore)		5			5	
6.	Jag Jeewan Gram (Mahu)		5			5	
7.	Nehru Van Gram (Mahu)			7			7
8.	Sendal (Mahu)			11			11
9.	Mendal (Mahu)			14			14
	<b>Cluster Village</b>						
10	Bercha (Mahu)			10			10
	<b>Control Village</b>						
	<b>Total</b>		5	5		5	5

5.67 The above table shows that though in non of the villages the high or higher school is located but in 5 number of villages these two facilities are located within the easy reach of the villagers i.e. within the five km radius of the village which are as per laid down distance criterion i.e. 5 kms for high school and more than 6 kms for higher school.

## COLLEGIATE AND TECHNICAL EDUCATION

5.68 The table below shows the details

Table No. 5.25  
Status of Collegiate and Technical Education

Sr. No.	Name of the village	College			Industrial training Instt.		
		within the village 0 km	within 5 km	more than 5 km	within the village 0 km	within 5 km	more than 5 km
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)			16			16
2.	Indira Gram (Mahu)			18			18
3.	Gaginda (Mahu)			25			25
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)			20			20
5.	Bari Kalmer (Indore)			14			14
6.	Jag Jeewan Gram (Mahu)			18			18
7.	Nehru Van Gram (Mahu)		5				15
8.	Sendal (Mahu)			38			38
9.	Mendal (Mahu)			40			40
	<b>Cluster Village</b>						
10	Bercha (Mahu)			23			28
	<b>Control Village</b>						
	<b>Total</b>		1	9			10

5.69 The above table shows that in non of the villages these facilities are located within the physical limits of ten sample villages which seem obvious as colleges and I.T.Is. are usuall located at district or tahsil headquarters. However, in the village Nehru Van Gram a college is located within the easy distance of 5 kms.

## HEALTH

5.70 Primary health care approach being the core strategy of the Tenth Plan for Madhya Pradesh, a multi tier health and family welfare service delivery system has been developed in the State consisting of sub-health centres, primary health centres and community health centres. Besides, civil hospitals, district hospitals and other special health care institutions have been provided as a support to three tier system. The norms accepted for three tier system is given below;

- a. Sub Health Centre for every 5,000 population in non-tribal areas and 3,000 population in tribal.
- b. Primary Health Centre for every 30,000 population in non-tribal areas and 20,000 population in tribal areas.
- c. Community Health Centre for 1,20,000 population in non-tribal areas and 80,000 population in tribal areas.

5.71 On the basis of aforesaid population criteria, the locational analysis of sub-health centres and Rural Family Welfare Centres may be attempted.

5.72 The table below shows the details;

Table No. 5.26  
Rural Health Infrastructure

Sr. No.	Name of the village	Sub Health Centre			Rural Family Welfare Centre		
		Within the Village 0 km	Within 5 km	More than 5 km	Within the Village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)		2			2	
2.	Indira Gram (Mahu)		5			5	
3.	Gaginda (Mahu)		3			2	
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)		3			3	
5.	Bari Kalmer (Indore)	0				1	
6.	Jag Jeewan Gram (Mahu)		5			5	
7.	Nehru Van Gram (Mahu)		2			2	
8.	Sendal (Mahu)		1			1	
9.	Mendal (Mahu)		3			3	
	<b>Cluster Village</b>						
10	Bercha (Mahu)			7			7
	<b>Control Village</b>						
	<b>Total</b>	<b>1</b>	<b>8</b>	<b>1</b>		<b>9</b>	<b>1</b>

Table No. 5.26 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Government Hospital			Government Dispensary		
		within the village 0 km	within 5 km	more than 5 km	within the village 0 km	within 5 km	more than 5 km
1	2	9	10	11	12	13	14
1.	Mali Badodia (Indore)			16			16
2.	Indira Gram (Mahu)		5			5	
3.	Gaginda (Mahu)			25		4	
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)		3			3	
5.	Bari Kalmer (Indore)			14	0		
6.	Jag Jeewan Gram (Mahu)		5			5	
7.	Nehru Van Gram (Mahu)			10		5	
8.	Sendal (Mahu)			12			12
9.	Mendal (Mahu)			14			14
	<b>Cluster Village</b>						
10	Bercha (Mahu)			28			7
	<b>Control Village</b>						
	<b>Total</b>		3	7	1	5	4

Table No. 5.26 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Private Clinic			Nursing Home		
		within the village 0 km	within 5 km	more than 5 km	within the village 0 km	within 5 km	more than 5 km
1	2	15	16	17	18	19	20
1.	Mali Badodia (Indore)		5				16
2.	Indira Gram (Mahu)		5				17
3.	Gaginda (Mahu)		4				20
	<b>Adopted Village</b>						
4.	Phool Karari (Indore)		3				20
5.	Bari Kalmer (Indore)	0					14
6.	Jag Jeewan Gram (Mahu)		5				17
7.	Nehru Van Gram (Mahu)		2				6
8.	Sendal (Mahu)		3				28
9.	Mendal (Mahu)	0					30
	<b>Cluster Village</b>						
10	Bercha (Mahu)			7			23
	<b>Control Village</b>						
	<b>Total</b>	2	7	1			10

- 5.73 **Against the total number of 10 villages only one village i.e. Bari Kalmer [cluster village] has sub health centre within the geographical limits of the village. In rest of the 8 villages [all from adopted and cluster villages] The sub health centre is located within 5 km distance from the village** while for village Bercha [control village] this facility is located at a distance of 7 km from the village. However, from the view point of accessibility the situation is satisfactory.
- 5.74 Regarding Rural Family Welfare Centre, in non of the villages this facility is located within the village. In 9 member of villages [all from adopted and cluster villages] the facility is located within easy reach of the villagers while only for village Bercha [control village] this facility is located 7 kms away from the village. However, in general, Rural Family Welfare Centres are within the easy reach of the villagers of our 10 number of sample villages.
- 5.75 As regards government hospitals, the facility is not available within the geographical limits of any of the sample village while in 3 number of villages this facility is available within 5 km radius of the village and for 7 number of villages, government hospitals are located more than 5 kms away from the village ranging between 10 kms for village Nehru Van Gram [cluster village] to 28 kms for village Bercha [control village].
- 5.76 **In two villages viz. Bari Kalmer and Mendal [cluster villages] the private clinics are located within the geographical limits of the village while in 7 villages this facility is located within easy reach of the villagers** and in village Bercha [control village] the facility is located 7 kms away from the village. The information indicates the confidence of the villagers on private medical practitioners because of the perpetual absence of doctors particularly of govt. institutions in rural health centres.
- 5.77 The private nursing homes are located for away from the identified ten villages ranging between 6 kms for the village Nehru Van Gram [cluster village] to 30 kms for village Mendal [cluster village].

## FAMIL WELFARE

5.78 Limiting the size of the family is the most important parameter of family welfare measures. The table below shows the status of the acceptors of family welfare measures in the sample villages covered under the study.

Table No. 5.27  
Status of Acceptors of Family Welfare Measurer

Sr. No	Name of the village	Total Workers	Acceptors of Nirodh (No. of Benefic-iaris)	Tubectomy (No. of Benefic-iaris)	Vasectomy (No. of Benefic-iaris)	Loop Insertion (No. of Benefic-iaris)	Oral Pills (No. of Benefic-iaris)	Traditional Methods (No. of Benefic-iaris)
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	251	10 [3.98]	10 [3.98]	3 [1.20]	4 [1.59]	9 [3.59]	0
2.	Indira Gram (Mahu)	155	5 [3.23]	7 [4.52]	0	3 [1.94]	7 [4.52]	0
3.	Gaginda (Mahu)	617	5 [0.81]	45 [7.29]	0	5 [0.81]	15 [2.43]	0
	<b>Adopted Villages</b>	1023	20 [1.96]	62 [6.06]	3 [0.29]	12 [1.17]	31 [3.03]	0
4.	Phool Karari (Indore)	300	15 [5.00]	16 [5.33]	0	0	18 [6.00]	0
5.	Bari Kalmer (Indore)	267	15 [5.62]	17 [6.37]	0	5 [1.87]	9 [3.37]	0
6.	Jag Jeewan Gram (Mahu)	123	6 [4.88]	5 [4.07]	1 [0.81]	2 [1.63]	5 [4.07]	0
7.	Nehru Van Gram (Mahu)	186	10 [5.38]	7 [3.76]	0	2 [1.08]	5 [2.69]	0
8.	Sendal (Mahu)	378	12 [3.17]	30 [7.94]	7 [1.85]	3 [0.79]	6 [1.59]	0
9.	Mendal (Mahu)	468	10 [2.14]	40 [8.55]	12 [2.56]	0	4 [0.85]	0
	<b>Cluster Villages</b>	1722	68 [3.95]	115 [6.68]	20 [1.16]	12 [0.70]	47 [2.73]	0
10	Bercha (Mahu)	521	4 [0.77]	18 [3.45]	0	0	10 [1.92]	0
	<b>Control Village</b>	521	4 [0.77]	18 [3.45]	0	0	10 [1.92]	0
	<b>Total</b>	3266	92 [2.82]	195 [5.97]	23 [0.70]	24 [0.73]	88 [2.69]	0

*Note : Figures in brackets show the percentage to figures of column laterally.*

5.79 In the above table the percentage figures have been arrived at on the basis of the figures of the workforce, which is, in strict sense is not correct. The comparison should have been on the basis of the figures of eligible couples. Since village wise such figures are not available, therefore as a second option the work force figures that usually include persons within the age group of 15 to 59 years have been taken who may be considered as population with reproductive capacity, particularly males.

5.80 Against the total figure of 3266 persons in the work force the total number of persons adopting various methods of family welfare is 422 which is 12.92 percent to total work force of ten identified villages. The performance to some extent is satisfactory as the figure would have gone to much higher level had the comparison made with the figure of eligible couple. As has been expected the emphasis is more on the methods of tubectomy and acceptance of Nirodh than on any other method.



## DRINKING WATER

5.81 The table below shows the existing level of drinking water facilities available in the sample villages.

Table No. 5.28  
Status of Drinking Water Facilities

Sl. No.	Name of the Village	Sources of drinking water				
		In the village	Distance from the village			
			=1 KM	=2 KMS.	=3 KMS.	=4KMS.
1	2	3	4	5	6	7
	<b>Adopted Villages</b>					
1	Mali Badodia	0	-	-	-	-
2	Indira Gram	0	-	-	-	-
3	Gaginda	0	-	-	-	-
	<b>Cluster Villages</b>					
4	Phool Karari	0	-	-	-	-
5	Bari Kalmer	0	-	-	-	-
6	Jag Jeevan Gram	0	-	-	-	-
7	Nehru Van Gram	0	-	-	-	-
8	Sendal	0	-	-	-	-
9	Mendal	0	-	-	-	-
	<b>Control Village</b>					
10	Bercha	0	-	-	-	-
	<b>Total</b>	10	-	-	-	-

5.82 In all the 10 number of sample villages one or other drinking water source, mostly hand pumps is available.

5.83 In what follows an attempt has been made to summarise the details of the village particulars.

- The basic purpose of the collection of information about village facilities for identified ten villages is to ascertain the absorption capacity of any prevailing or new technology regarding any field what-so-ever.
- In villages like Indira Gram [adopted village], Bari Kalmer [cluster village], Jag Jeevan Gram [cluster village] and Nehru Van Gram [cluster village] the percentage of S.C. population is more than that of S.T., population while in rest of the villages a reverse trend is visible.
- The literacy rate that ranged between 24.5 percent for village Mendal [cluster village] a predominantly tribal village to 57.8 percent for village Bercha [control village] is lower than both district and state level per centage literacy of 74.82 and 64.08 respectively.
- The extent of similar work participation rate between male and female is healthy trend indicating awareness and intent of female population residing in our sample area to contribute meaningfully towards household income.
- The proportion of non workers that ranged between 38.6 percent for village Bari Kalmer [cluster village] to 55.1 percent for village Jag Jivan Gram [cluster village] presents a dismal picture as it shows the higher number of dependent population consisting mainly of children, old persons, infirms and unemployed who are not in position to contribute much towards family income.

- Agriculture remains to be the main occupation of the ten villages identified for the study. Out of the ten villages, in six number of village the proportion of female cultivators is more than that of male that signifies the awareness of the female members of the farming community to work along with their male counterpart for addition in household income.
- In case of the occupation of agriculture labour the preponderance of female participation over male participation is indicative of the fact that females of our sample area are making strides for enhancement of household income.
- The situation regarding proportion of workers in the household industries to total workers is far from being satisfactory as it ranged between 0.4 percent for village Bari Kalmer [cluster village] and Bercha [control village] to 6.3 percent for village Phool Karari [cluster village].
- Regarding land use the percentage of gross irrigated area to gross cropped area is 54.23 which is more than the district average of 36.70 percent and state average of 28.54 percent.
- All the villages covered under the study are electrified with irregular hours of power supply.
- For district Indore the number of pump sets energized per thousand hectare of gross cropped area is 97 as against state average of 60 that shows the viable nature of agriculture in the district.
- There is complete absence of the existence of any household industrial units in the sample area of our study.
- Total number of 10 cooperative societies are existing in our area of study distributed between adopted and cluster villages with no such societies functioning in control village i.e. Bercha.
- The situation of availability of road net work in the sample area of the study is not very satisfactory as in non of the villages even the fair weather roads exist.
- In non of the villages the agriculture marketing facilities exist, even the weekly markets are not organised. The absence of any fair price shop in all the identified 10 villages is a definite draw back.
- In 4 numbers of villages the flour mills exist within the geographical limits of the district.
- Every village has primary school within the physical limits of the village.
- Only five number of villages have middle school within the geographical limits of the district while in non of the villages facilities regarding secondary level education, collegiat level education and technical institution exist.
- Only in village Bari Kalmer [cluster village] sub health centre within the geographical limits of the village exist while in 8 number of villages [all from adopted and cluster groups] this facility is located within 5 km. distance from the village.
- Rural family welfare centres are within the easy reach of all the ten number of sample villages.
- In two villages viz. Bari Kalmer and Mendal [cluster villages] the private clinics are located within the geographical limits of the district while in 7 number of villages this facility is located within easy reach.
- Regarding family welfare, the emphasis is more on the acceptance of measures like tubectomy and nirodh than any other method.
- In all the 10 number of villages one or other drinking water source, mostly hand pumps, is available.

**Results of Survey**

- **Household Particulars**

5.84 The present part of the chapter deals with the information relating to the households in the following dimensions;

- (i) Macro Dimensions – Wherein information from all the households residing in 10 number of sample villages has been collected.
- (ii) Micro Dimensions – Wherein 25 percent of the households have been identified for the detailed enquiry.

5.85 In what follows an attempt has been made to detail out both macro and micro dimensions based on the information collected through House Listing Schedule and household Schedule.

### MACRO DIMENSIONS – GENERAL PARTICULARS

5.86 The table below shows the details;

Table No. 5.29  
Household Details

S. No.	Name of the Village	No. of household as on the date of survey	Population Census-2001	Average size of he family (based on the figure of col.4
1	2	3	4	5
1.	Mali Badodia (Indore)	79	515	6
2.	Indira Gram (Mahu)	47	338	7
3.	Gaginda (Mahu)	103	1168	11
	<b>Adopted Village</b>	229	2021	9
4.	Phool Karari (Indore)	77	536	7
5.	Bari Kalmer (Indore)	92	435	5
6.	Jag Jeewan Gram (Mahu)	51	274	5
7.	Nehru Van Gram (Mahu)	52	332	6
8.	Sendal (Mahu)	125	736	6
9.	Mendal (Mahu)	166	874	5
	<b>Cluster Village</b>	563	3187	7
10	Bercha (Mahu)	69	931	13
	<b>Control Village</b>	69	931	13
	<b>Total</b>	<b>861</b>	<b>6139</b>	<b>7</b>

5.87 The total number of households as per survey is 861 for all the ten identified villages. The average size of the family comes to 7 persons which is more than the average size of the family of 5 persons. For village Gaginda and Bercha the average size of the family is 11 and 13 respectively that needs the special attention of district administration.

## SOCIAL STATUS OF THE HOUSEHOLDS

5.88 The table below shows the social status of the households;

Table No. 5.30  
Social Status of the Households.

S. No.	Name of the Village	No. of Household	Caste (Social classification)				Interaction with KVK	
			S.T.	S.C.	O.B.C.	General	Yes	No
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	79	7	15	49	8	28	51
2.	Indira Gram (Mahu)	47	0	41	6	0	36	11
3.	Gaginda (Mahu)	103	101	0	2	0	47	56
	<b>Adopted Village</b>	229	108	56	57	8	111	118
4.	Phool Karari (Indore)	77	2	34	16	25	24	53
5.	Bari Kalmer (Indore)	92	0	54	8	30	30	62
6.	Jag Jeewan Gram (Mahu)	51	0	51	0	0	21	30
7.	Nehru Van Gram (Mahu)	52	0	52	0	0	19	33
8.	Sendal (Mahu)	125	81	9	31	4	63	62
9.	Mendal (Mahu)	166	166	0	0	0	66	100
	<b>Cluster Village</b>	563	249	200	55	59	223	340
10	Bercha (Mahu)	69	68	1	0	0	0	69
	<b>Control Village</b>	69	68	1	0	0	0	69
	<b>Total</b>	861	425	257	112	67	334	527

5.89 The above table shows the prepondence of S.T., S.C. households, the combined percentage of which is 79.21 to total number of 861 households which underlines one important fact that the vulnerable communities in our sample villages are pursuing the agriculture occupation in viable manner.

## HOUSEHOLDS CLASSIFIED ON THE BASIS OF RELIGION

5.90 The table below shows the details;

Table No. 5.31  
Distribution of Households according to Religion

S. No	Name of the Village	No. of Household	Hindu	Muslim	Sikh	Christian	Nu-Buddh
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)	79	79	0	0	0	0
2.	Indira Gram (Mahu)	47	47	0	0	0	0
3.	Gaginda (Mahu)	103	103	0	0	0	0
	<b>Adopted Village</b>	229	229	0	0	0	0
4.	Phool Karari (Indore)	77	77	0	0	0	0
5.	Bari Kalmer (Indore)	92	92	0	0	0	0
6.	Jag Jeewan Gram(Mahu)	51	51	0	0	0	0
7.	Nehru Van Gram(Mahu)	52	52	0	0	0	0
8.	Sendal (Mahu)	125	125	0	0	0	0
9.	Mendal (Mahu)	166	166	0	0	0	0
	<b>Cluster Village</b>	563	563	0	0	0	0
10	Bercha (Mahu)	69	69	0	0	0	0
	<b>Control Village</b>	69	69	0	0	0	0
	<b>Total</b>	861	861	0	0	0	0

5.91 All the households in our area of study belong to Hindu religion.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – MAIN OCCUPATION PRIMARY SECTOR – AGRICULTURE

5.92 The table below shows the details;

Table No. 5.32  
Household According to their Main Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	79	4	54	15	1
2.	Indira Gram (Mahu)	47	4	20	0	1
3.	Gaginda (Mahu)	103	16	26	25	14
	<b>Adopted Villages</b>	229	24	100	40	16
4.	Phool Karari (Indore)	77	21	10	22	15
5.	Bari Kalmer (Indore)	92	26	19	21	15
6.	Jag Jeewan Gram (Mahu)	51	15	8	4	15
7.	Nehru Van Gram (Mahu)	52	10	15	8	15
8.	Sendal (Mahu)	125	31	29	27	16
9.	Mendal (Mahu)	166	55	27	40	19
	<b>Cluster Villages</b>	563	158	108	122	95
10	Bercha (Mahu)	69	15	17	10	19
	<b>Control Village</b>	69	15	17	10	19
	<b>Total</b>	861	197	225	172	130

5.93 Out of the total number of 861 households 724 number of households constituting 84.09 percent to total households are engaged directly in agriculture as their main occupation that clearly indicators the proper rational of selection of villages in the groups of adopted and cluster. The combined percentage of other farmers and small farmers is 46.11 that justifies one fact clearly that the absorption capacity of new or prevailing technologies exists in our area of study which in due course will definitely cover the marginal farmers as well.

## PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

5.94 Activities allied to agriculture are equally important as additional source of income and employment in rural areas. The table below shows the details;

Table No. 5.33

Households according to their Main Occupations – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Produce Collection	Livestock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	79	1	4	0	0
2.	Indira Gram (Mahu)	47	0	0	0	0
3.	Gaginda (Mahu)	103	0	9	0	0
	<b>Adopted Villages</b>	229	1	13	0	0
4.	Phool Karari (Indore)	77	0	0	0	0
5.	Bari Kalmer (Indore)	92	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	51	0	0	0	0
7.	Nehru Van Gram (Mahu)	52	0	0	0	0
8.	Sendal (Mahu)	125	0	0	0	0
9.	Mendal (Mahu)	166	1	3	0	0
	<b>Cluster Villages</b>	563	1	3	0	0
10	Bercha (Mahu)	69	0	4	0	0
	<b>Control Village</b>	69	0	4	0	0
	<b>Total</b>	861	2	20	0	0

5.95 The above table shows that in non of the 10 identified villages the activities like fishing and hunting are being pursued as main occupation. Only marginal number of 2 households are engaged in minor forest produce collection work while 20 households are pursuing livestock activities as their main source of livelihood. In short activities allied to agriculture are not popular in our area of study.

## SECONDARY AND TERTIARY SECTORS

5.96 Secondary and tertiary sector occupations are important from view points of income augmentation and employment generation and absorption of work force in lean season of agriculture. The table below shows the details;

Table No. 5.34

Households According to their Main Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of Household	Secondary Sector		Tertiary Sector	
			Servicing And Repairs	Construction Work	Government Service	Service in Pvt. Sector
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	79	0	0	0	0
2.	Indira Gram (Mahu)	47	0	0	0	3
3.	Gaginda (Mahu)	103	0	0	0	8
	<b>Adopted Village</b>	229	0	0	0	11
4.	Phool Karari (Indore)	77	0	0	2	5
5.	Bari Kalmer (Indore)	92	0	0	0	2
6.	Jag Jeewan Gram (Mahu)	51	0	0	0	1
7.	Nehru Van Gram (Mahu)	52	0	0	0	0
8.	Sendal (Mahu)	125	0	0	0	3
9.	Mendal (Mahu)	166	1	3	1	2
	<b>Cluster Village</b>	563	1	3	3	13
10	Bercha (Mahu)	69	0	0	2	6
	<b>Control Village</b>	69	0	0	2	6
	<b>Total</b>	861	1	3	5	30

5.97 The above table shows that out of the total number of 861 households only 4 households [0.46 percent to total households] are engaged in secondary sector occupations while 35 number of households [4.07 percent] are engaged in tertiary sector occupations which are insignificant. However, comparatively higher level of employment in private sector indicates the presence of private entrepreneur in our area of study.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – SUBSIDIARY OCCUPATIONS

### PRIMARY SECTOR – AGRICULTURE

5.98 The table below shows the details;

Table No. 5.35  
Households According to their Subsidiary Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	79	0	1	1	11
2.	Indira Gram (Mahu)	47	0	4	0	11
3.	Gaginda (Mahu)	103	0	4	0	40
	<b>Adopted Village</b>	229	0	9	1	62
4.	Phool Karari (Indore)	77	0	11	2	46
5.	Bari Kalmer (Indore)	92	0	11	0	51
6.	Jag Jeewan Gram (Mahu)	51	0	12	0	20
7.	Nehru Van Gram (Mahu)	52	0	12	0	22
8.	Sendal (Mahu)	125	1	13	0	93
9.	Mendal (Mahu)	166	4	15	0	100
	<b>Cluster Village</b>	563	5	74	2	350
10	Bercha (Mahu)	69	4	15	0	20
	<b>Control Village</b>	69	4	15	0	20
	<b>Total</b>	861	9	98	3	432

5.99 The above table shows that out of total number of 861 households, 542 households are engaged in agriculture as subsidiary occupation which is 62.95 percent to total households. Normally the percentage of households to total households engaged in agriculture both in main and subsidiary occupations should be 100 but in this case the percentage is 147.04 which is mainly due the fact that at times agriculture labour in main occupation start working as hired agriculture labour for other cultivators as part time workers for income enhancement with the result the percentage involvement gets inflated which is evident from the fact that 50.17 percent households are engaged in pursuing the occupation of agriculture labour as subsidiary occupation.

### PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

5.100 The table below shows the details;

Table No. 5.36

## Households According to their Subsidiary Occupation – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Produce Collection	Livestock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	79	0	0	0	0
2.	Indira Gram (Mahu)	47	0	0	0	0
3.	Gaginda (Mahu)	103	0	1	0	0
	<b>Adopted Villages</b>	229	0	1	0	0
4.	Phool Karari (Indore)	77	0	0	0	0
5.	Bari Kalmer (Indore)	92	0	3	0	0
6.	Jag Jeewan Gram (Mahu)	51	0	0	0	0
7.	Nehru Van Gram (Mahu)	52	0	0	0	0
8.	Sendal (Mahu)	125	8	4	0	0
9.	Mendal (Mahu)	166	8	8	0	1
	<b>Cluster Villages</b>	563	16	15	0	1
10	Bercha (Mahu)	69	0	0	0	0
	<b>Control Village</b>	69	0	0	0	0
	<b>Total</b>	861	16	16	0	1

5.101 The aggregate percentage of households engaged in activities like forest, livestock, fisheries and hunting as subsidiary occupation to total households [mostly in adopted and cluster villages] is 3.83 which can hardly be termed as any sort of performance. These activities are supportive source of income which should be encouraged by government initiatives provided there is willingness from the target groups to adopt such occupations.

**SECONDARY AND TERTIARY SECTORS**

5.102 The table below shows the details;

Table No. 5.37

## Households According to their Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of Household	Secondary Sector		Tertiary Sector	
			Servicing and Repairs	Construction Work	Govt. Service	Service in Pvt Sector
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	79	0	0	0	2
2.	Indira Gram (Mahu)	47	0	0	2	0
3.	Gaginda (Mahu)	103	0	0	0	1
	<b>Adopted Villages</b>	229	0	0	2	3
4.	Phool Karari (Indore)	77	0	0	0	3
5.	Bari Kalmer (Indore)	92	0	0	0	4
6.	Jag Jeewan Gram (Mahu)	51	0	0	0	4
7.	Nehru Van Gram (Mahu)	52	0	0	0	1
8.	Sendal (Mahu)	125	0	0	0	7
9.	Mendal (Mahu)	166	0	0	0	7
	<b>Cluster Villages</b>	563	0	0	0	26
10	Bercha (Mahu)	69	0	0	0	0
	<b>Control Village</b>	69	0	0	0	0
	<b>Total</b>	861	0	0	2	29



5.103 Involvement of households in activities relating to secondary sector as subsidiary occupation is nil in our area of study while only 31 households are engaged in tertiary sector mostly service in private sector.

5.104 **The Only conclusion that can be drawn from the narrations in foregoing paragraphs is that agriculture is the only activity of the area under study which is being pursued on viable scale.**

### AVERAGE MONTHLY INCOME

5.105 In any survey work the most difficult part is the collection of information regarding income and expenditure of the household with reasonable accuracy as the households are very cautious about parting with the facts. However, the information shows a trend that may be useful for supporting conclusions which have direct or indirect relations with levels of income of the households. The table below shows the details;

Table No. 5.38  
Average Monthly Income

S. No.	Name of the Village	No. of House hold	Blow Rs.500	Rs.5001 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	79	1	0	0	2	0	13	63
2.	Indira Gram (Mahu)	47	0	0	0	1	0	2	44
3.	Gaginda (Mahu)	103	2	1	0	4	1	24	71
	<b>Adopted Villages</b>	229	3	1	0	7	1	39	178
4.	Phool Karari (Indore)	77	0	0	0	1	1	6	69
5.	Bari Kalmer (Indore)	92	3	0	0	1	0	9	79
6.	Jag Jeewan Gram (Mahu)	51	1	0	0	0	0	0	50
7.	Nehru Van Gram (Mahu)	52	0	0	0	1	0	2	49
8.	Sendal (Mahu)	125	2	0	0	4	0	11	108
9.	Mendal (Mahu)	166	4	1	1	8	0	31	121
	<b>Cluster Villages</b>	563	10	1	1	15	1	59	476
10	Bercha (Mahu)	69	0	0	0	5	1	20	43
	<b>Control Village</b>	69	0	0	0	5	1	20	43
	<b>Total</b>	861	13	2	1	27	3	118	697

5.106 The viable nature of agriculture as main and subsidiary occupations is reflected by the fact that out of 861 number of households the combined number of households within the income range of Rs. 901 to Rs. 1000 and Rs. 1001 and above per month is 815 which is 94.66 percent to total households. In adopted villages this percentage is 94.76 while in cluster villages it is 95.03 percent. Even in control village where there is no intervention of K.V.K. the percentage of households within the income range Rs. 901 to Rs. 1000 and Rs. 1001 and above per month as 91.30 that shows overall affluence level of the area.

## AVERAGE MONTHLY EXPENDITURE

5.107 The table below shows the details;

Table No. 5.39  
Average Monthly Expenditure

S. No.	Name of the Village	No. of Household	Blow Rs.500	Rs.501 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	79	0	0	0	7	1	16	55
2.	Indira Gram (Mahu)	47	1	0	0	1	1	5	39
3.	Gaginda (Mahu)	103	1	2	0	4	0	23	73
	<b>Adopted Village</b>	229	2	2	0	12	2	44	167
4.	Phool Karari (Indore)	77	2	0	0	1	0	9	65
5.	Bari Kalmer (Indore)	92	1	0	0	1	0	14	76
6.	Jag Jeewan Gram (Mahu)	51	1	0	0	0	0	1	49
7.	Nehru Van Gram (Mahu)	52	0	0	1	1	0	9	41
8.	Sendal (Mahu)	125	8	1	0	2	0	7	107
9.	Mendal (Mahu)	166	6	1	1	9	0	45	104
	<b>Cluster Village</b>	563	18	2	2	14	0	85	442
10	Bercha (Mahu)	69	1	0	1	5	0	14	48
	<b>Control Village</b>	69	1	0	1	5	0	14	48
	<b>Total</b>	861	21	4	3	31	2	143	657

5.108 In line with income level, the percentage of households within the expenditure range of Rs. 901 to Rs. 1000 and Rs. 1001 and above per month to total households is 92.93 with the break-up of 92.14 percent for adopted villages and 93.61 percent for cluster villages which further shows the affluence level of the area.

5.109 To **sum up** it may be mentioned that

- **The average size of the households for all the identified ten villages is 7 persons**
- **The preponderance of S.C., S.T. households the combined percentage of which is 79.21 percent to total of 861 households is the marked feature of our sample area.**
- **All the households in our area of study belong to Hindu religion.**
- **Agriculture is the main occupation of the households of our sample area constituting 84.09 percent to total households. The combined percentage of other farmers and small farmers is 46.11 that indicates the extent of absorption capacity of new or prevailing technologies pertaining to agriculture.**
- **Only marginal number of 20 households [2.32 percent] are pursuing livestock activities as their main occupation. In short activities allied to agriculture is not popular in our area of study.**
- **In secondary and tertiary sector occupations only 4.53 percent households to total of 861 households are engaged. Comparatively higher level of employment in private sector indicates the presence of private entrepreneur in our area of study.**

- Only 31 number of households [3.60 percent] are engaged in tertiary sector mostly serving in private sector.
- Regarding average monthly income the combined number of households within the income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above per month is 815 which is 94.66 percent to total households which shows an overall affluence level of the area.
- Regarding average monthly expenditure the percentage of households within the expenditure range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above to total households is 92.33

## RESULTS OF THE SURVEY – MICRO DIMENSION

5.110 In this part of the Chapter 25 percent of the households have been identified for detailed enquiry which comes 214 households.

5.111 The table below shows the details;

Table No. 5.40  
Male – Female Distribution

S. No.	Name of the Village	No. of Families Selected	No. of Family Members	Male Total	Age, Male						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Mali Badodia (Indore)	20	104	54	13	14	13	4	3	6	1
2.	Indira Gram (Mahu)	12	94	55	11	17	15	3	5	2	2
3.	Gaginda (Mahu)	26	161	90	19	39	8	10	12	2	0
	<b>Adopted Villages</b>	58	359	199	43	70	36	17	20	10	3
4.	Phool Karari (Indore)	19	114	64	25	13	10	7	6	3	0
5.	Bari Kalmer (Indore)	23	121	50	7	13	9	9	8	4	0
6.	Jag Jeewan Gram (Mahu)	12	67	36	13	5	8	4	6	0	0
7.	Nehru Van Gram (Mahu)	13	76	41	6	17	5	3	7	3	0
8.	Sendal (Mahu)	31	164	90	27	25	10	11	10	3	4
9.	Mendal (Mahu)	41	199	101	35	22	23	10	8	2	1
	<b>Cluster Villages</b>	139	741	382	113	95	65	44	45	15	5
10	Bercha (Mahu)	17	85	44	20	6	7	8	2	1	0
	<b>Control Village</b>	17	85	44	20	6	7	8	2	1	0
	<b>Total</b>	214	1185	625	176	171	108	69	67	26	8

Table No. 5.40 [Contd...]  
Male – Female Distribution

S. No.	Name Of The Village	No. of Families Selected	No. of Family Members	Female Total	Age, Female						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	13	14	15	16	17	18	19	20
1.	Mali Badodia (Indore)	20	104	50	12	12	9	4	5	5	3
2.	Indira Gram (Mahu)	12	94	39	8	7	9	5	5	3	2
3.	Gaginda (Mahu)	26	161	71	22	22	7	14	4	2	0
	<b>Adopted Village</b>	58	359	160	42	41	25	23	14	10	5
4.	Phool Karari (Indore)	19	114	50	11	16	7	8	5	3	0
5.	Bari Kalmer (Indore)	23	121	71	23	18	12	6	9	3	0
6.	Jag Jeewan Gram (Mahu)	12	67	31	4	13	4	4	4	1	1
7.	Nehru Van Gram (Mahu)	13	76	35	8	9	5	5	6	1	1
8.	Sendal (Mahu)	31	164	74	25	15	9	10	7	5	3
9.	Mendal (Mahu)	41	199	98	40	20	16	11	5	4	2
	<b>Cluster Village</b>	139	741	359	111	91	53	44	36	17	7
10	Bercha (Mahu)	17	85	41	13	12	9	6	1	0	0
	<b>Control Village</b>	17	85	41	13	12	9	6	1	0	0
	<b>Total</b>	214	1185	560	166	144	87	73	51	27	12

**5.112** The above table shows that out of the total number of 1185 number of persons from 214 households males constitute 52.74 percent while females constitute 47.26 percent. The number of males within the age group of 20 to 60 years which represents labour force is 270 which is 43.20 percent to total number of 625 males is indicative of a positive fact that more persons are available for any productive work. These percentages are 41.71 in adopted villages and 44.24 in cluster villages which underline one basic point that in case of rapid development of agriculture through application of technology by the K.V.Ks. the possibility of absorbing the existing labour force will arrest the tendency of migration during lean season of agriculture. In case of females this percentage is 42.50 with break ups of 45.00 percent for adopted villages and 41.78 percent for cluster villages [more or less in line with male population] that again shows the availability of female labour – force for pursuance of any activity for family income augmentation along with engaging themselves in agriculture with their male counterpart. The percentage of dependent persons comprising of population within the age group of 0 to 10 years and 60 years and above who do not usually contribute towards family income is 13.44 in case of males and 31.79 percent in case females, is within a fair limit particularly for males which ofcourse is again a positive indicator.

## EDUCATIONAL STATUS OF SAMPLE HOUSEHOLDS

5.113 Education and literacy are the twin prerequisites necessary for adoption of any sort of technology. The table below shows the educational status of sample households;

Table No. 5.41

### Educational Status

S. No.	Name of The Village	No. of Families Selected	No. of Family Members	Illiterate	Literate without going to school	Primary No.	Middle No.
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)	20	104	42	0	19	31
2.	Indira Gram (Mahu)	12	94	32	0	25	23
3.	Gaginda (Mahu)	26	161	69	0	45	22
	<b>Adopted Village</b>	58	359	143	0	89	76
4.	Phool Karari (Indore)	19	114	22	1	41	34
5.	Bari Kalmer (Indore)	23	121	17	0	39	54
6.	Jag Jeewan Gram (Mahu)	12	67	18	0	24	14
7.	Nehru Van Gram (Mahu)	13	76	20	0	20	20
8.	Sendal (Mahu)	31	164	38	1	68	46
9.	Mendal (Mahu)	41	199	117	1	47	26
	<b>Cluster Village</b>	139	741	232	3	239	194
10	Bercha (Mahu)	17	85	15	0	58	11
	<b>Control Village</b>	17	85	15	0	58	11
	<b>Total</b>	214	1185	390	3	386	281

Table No. 5.41 [Contd...]

### Educational Status

S. No	Name of The Village	No. of Families Selected	No. of Family Members	High School No.	Higher School No.	Graduate No.	Post Graduate No.	Others
1	2	3	4	9	10	11	12	13
1.	Mali Badodia (Indore)	20	104	11	1	0	0	0
2.	Indira Gram (Mahu)	12	94	12	2	0	0	0
3.	Gaginda (Mahu)	26	161	22	3	0	0	0
	<b>Adopted Villages</b>	58	359	45	6	0	0	0
4.	Phool Karari (Indore)	19	114	15	0	1	0	0
5.	Bari Kalmer (Indore)	23	121	10	1	0	0	0
6.	Jag Jeewan Gram(Mahu)	12	67	8	3	0	0	0
7.	Nehru Van Gram(Mahu)	13	76	10	5	1	0	0
8.	Sendal (Mahu)	31	164	9	2	0	0	0
9.	Mendal (Mahu)	41	199	8	0	0	0	0
	<b>Cluster Villages</b>	139	741	60	11	2	0	0
10	Bercha (Mahu)	17	85	1	0	0	0	0
	<b>Control Village</b>	17	85	1	0	0	0	0
	<b>Total</b>	214	1185	106	17	2	0	0

5.114 The literacy percentage against the total of 1185 persons is 67.08 which is lower than the district average of 74.82 percent but higher than the state average of 64.11 percent as per census 2001. The percentage of children in levels of elementary education [primary + middle levels] is 56.29 which shows the fair impact of the programme of Universalisation of Elementary Education over our area of study. The extent of higher education is far from being impressive mainly because of the lack of higher educational facilities in our area of study. **However, an overall educational status that emerges justifies the extent of absorption capacity of the people of the sample area to adopt technology regarding agriculture introduced particularly by the K.V.K.**

### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS–MAIN OCCUPATION

5.115 Out of the total of 1185 household members of our sample area, 273 persons are engaged in various main occupations which constitute 23.04 percent to total household members. In what follow an attempt has been made to analyse the information pertaining to main occupations.

### OCCUPATIONS RELATING TO AGRICULTURE

5.116 The table below shows the details;

Table No. 5.42  
Main Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)	20	104	11	0	7	0
2.	Indira Gram (Mahu)	12	94	12	0	0	8
3.	Gaginda (Mahu)	26	161	8	0	19	2
	<b>Adopted Village</b>	58	359	31	0	26	10
4.	Phool Karari (Indore)	19	114	0	0	23	0
5.	Bari Kalmer (Indore)	23	121	0	0	25	2
6.	Jag Jeewan Gram (Mahu)	12	67	10	0	1	1
7.	Nehru Van Gram (Mahu)	13	76	6	0	8	1
8.	Sendal (Mahu)	31	164	13	2	17	5
9.	Mendal (Mahu)	41	199	12	0	29	1
	<b>Cluster Village</b>	139	741	41	2	103	10
10	Bercha (Mahu)	17	85	6	0	11	5
	<b>Control Village</b>	17	85	6	0	11	5
	<b>Total</b>	214	1185	78	2	140	25

5.117 One of the conclusions that can be drawn from the information contained in the above table is that farmers usually middle level and large cultivators and the small farmers the combined percentage of which is 18.40 to total household members and 79.85 percent to total number of persons engaged in various main occupations pursue the agriculture as their main source of livelihood and are capable of implementing the improved technology relating to agriculture production. The number of persons engaged as marginal farmers and agriculture labour are negligible which is positive indication that agriculture in our area of study is being pursued on viable scale.

5.118 In case of adopted villages the combined percentage of small farmers and farmers is 15.88 to total household members and 67.86 percent to persons pursuing various main occupations while for cluster group of villages these percentages are 19.43 and 86.75 respectively that clearly indicate the rational base followed for selection of such villages in the groups of adopted and cluster for transfer of improved technology relating to enhancement of agriculture production.

## OCCUPATIONS ALLIED TO AGRICULTURE

5.119 The table below shows the details;

Table No. 5.43  
Main Occupations – Allied to Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Minor Forest Produce Collection	Live stock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)	20	104	0	1	0	0
2.	Indira Gram (Mahu)	12	94	0	0	0	0
3.	Gaginda (Mahu)	26	161	0	1	0	0
	<b>Adopted Villages</b>	58	359	0	2	0	0
4.	Phool Karari (Indore)	19	114	0	0	0	0
5.	Bari Kalmer (Indore)	23	121	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	12	67	0	0	0	0
7.	Nehru Van Gram (Mahu)	13	76	0	0	0	0
8.	Sendal (Mahu)	31	164	0	1	0	0
9.	Mendal (Mahu)	41	199	0	0	0	0
	<b>Cluster Villages</b>	139	741	0	1	0	0
10	Bercha (Mahu)	17	85	0	0	0	1
	<b>Control Village</b>	17	85	0	0	0	1
	<b>Total</b>	214	1185	0	3	0	1

5.120 One of the mandates of K.V.K. is to encourage the activities allied to agriculture particularly that of animal husbandry and fisheries as alternate sources of rural income with immense advantage of reducing pressure on land. The above table shows the near absence of such activities in our area of study as only 3 persons are pursuing livestock activities as main occupation [all from adopted and cluster villages] and only one person in control village is engaged in hunting activities on full time basis. One of the greatest disadvantages of the rural scenario of Madhya Pradesh is the absence of such activities particularly in the far-flung areas that keep the rural inhabitants in a state of perpetual poverty.

## OCCUPATIONS RELATING TO SECONDARY AND TERTIARY SECTORS

5.121 The table below shows the details;

Table No. 5.44  
Main Occupation – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of families selected	No. of family members	Manufacturing of by Product	Servicing and repairs	Const- ruction work	Govt. Service	Service in Pvt. Sector
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	20	104	0	0	0	0	0
2.	Indira Gram Mahu)	12	94	0	3	11	0	0
3.	Gaginda (Mahu)	26	161	0	0	1	0	0
	<b>Adopted Village</b>	58	359	0	3	12	0	0
4.	Phool Karari (Indore)	19	114	0	0	0	0	0
5.	Bari Kalmer (Indore)	23	121	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	12	67	0	0	7	0	0
7.	Nehru Van Gram (Mahu)	13	76	0	0	1	0	0
8.	Sendal (Mahu)	31	164	0	0	0	0	0
9.	Mendal (Mahu)	41	199	0	0	0	1	0
	<b>Cluster Village</b>	139	741	0	0	8	1	0
10	Bercha (Mahu)	17	85	0	0	0	0	0
	<b>Control Village</b>	17	85	0	0	0	0	0
	<b>Total</b>	214	1185	0	3	20	1	0

5.122 The K.V.Ks. offer training to unemployed youth for self employment. Employment of only 23 persons in secondary occupations [all from adopted and cluster villages] can hardly be termed as encouraging. One of the important causes of rural poverty is absence of secondary sector occupations in rural areas.

#### **OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS IN SUBSIDIARY OCCUPATIONS**

5.123 Out of total of 1185 persons only 22 persons are engaged in various subsidiary occupations that constitute 1.86 percent to total household members of our sample area. The picture is hardly meaningful.

#### **SUBSIDIARY OCCUPATIONS – AGRICULTURE**

5.124 The table below shows the details;



Table No. 5.45  
Subsidiary Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)	20	104	1	0	2	2
2.	Indira Gram (Mahu)	12	94	0	0	0	0
3.	Gaginda (Mahu)	26	161	0	0	0	2
	<b>Adopted Village</b>	58	359	1	0	2	4
4.	Phool Karari (Indore)	19	114	0	0	0	0
5.	Bari Kalmer (Indore)	23	121	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	12	67	1	0	0	3
7.	Nehru Van Gram(Mahu)	13	76	0	1	0	1
8.	Sendal (Mahu)	31	164	1	0	0	0
9.	Mendal (Mahu)	41	199	0	0	1	0
	<b>Cluster Village</b>	139	741	2	1	1	4
10	Bercha (Mahu)	17	85	0	0	1	0
	<b>Control Village</b>	17	85	0	0	1	0
	<b>Total</b>	214	1185	3	1	4	8

5.125 The above table shows the involvement of only 16 persons in agricultural occupations which is hardly a meaningful affair.

#### SUBSIDIARY OCCUPATIONS – ALLIED TO AGRICULTURE

5.126 The table below shows the details;

Table No. 5.46  
Subsidiary Occupation – Allied to Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Minor Forest Produce Collection	Live stock activities	Fishing Activities	Hunting Activities	Mining and Quarrying
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	20	104	0	0	0	0	0
2.	Indira Gram (Mahu)	12	94	0	0	0	0	0
3.	Gaginda (Mahu)	26	161	0	1	0	0	0
	<b>Adopted Village</b>	58	359	0	1	0	0	0
4.	Phool Karari (Indore)	19	114	0	0	0	0	0
5.	Bari Kalmer (Indore)	23	121	0	1	0	0	0
6.	Jag Jeewan Gram (Mahu)	12	67	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	13	76	0	0	0	0	0
8.	Sendal (Mahu)	31	164	0	0	0	0	0
9.	Mendal (Mahu)	41	199	0	0	0	0	0
	<b>Cluster Village</b>	139	741	0	1	0	0	0
10	Bercha (Mahu)	17	85	0	0	0	0	0
	<b>Control Village</b>	17	85	0	0	0	0	0
	<b>Total</b>	214	1185	0	2	0	0	0

5.127 The above table shows that only two persons are pursuing occupation regarding livestock rearing as subsidiary occupation which hardly carries any meaning.

### SUBSIDIARY OCCUPATION – SECONDARY AND TERTIARY SECTORS

5.128 The table below shows the details;

Table No. 5.47  
Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of families selected	No. of family members	Manufacturing of by Product	Servicing and repairs	Construction work	Govt. Service	Service in Pvt. Sector
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	20	104	0	0	1	0	0
2.	Indira Gram (Mahu)	12	94	0	0	0	0	0
3.	Gaginda (Mahu)	26	161	0	0	0	0	0
	<b>Adopted Village</b>	58	359	0	0	1	0	0
4.	Phool Karari (Indore)	19	114	0	0	1	1	0
5.	Bari Kalmer (Indore)	23	121	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	12	67	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	13	76	0	0	0	0	0
8.	Sendal (Mahu)	31	164	0	0	0	1	0
9.	Mendal (Mahu)	41	199	0	0	0	0	0
	<b>Cluster Village</b>	139	741	0	0	1	2	0
10	Bercha (Mahu)	17	85	0	0	0	0	0
	<b>Control Village</b>	17	85	0	0	0	0	0
	<b>Total</b>	214	1185	0	0	2	2	0

5.129 Again there are only four persons engaged in secondary and tertiary sectors which is not a meaningful state of affairs.

### AVERAGE MONTHLY INCOME

5.130 The table below shows the details;

Table No. 5.48  
Average Monthly Income

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 & above
1	2	3	4	5	6	7	8	9	10	11
1.	Mali Badodia (Indore)	20	104	20	0	0	0	0	0	84
2.	Indira Gram (Mahu)	12	94	18	2	0	1	0	9	64
3.	Gaginda (Mahu)	26	161	28	0	0	0	0	2	131
	<b>Adopted Villages</b>	58	359	66	2	0	1	0	11	279
4.	Phool Karari (Indore)	19	114	20	0	0	0	0	0	94
5.	Bari Kalmer (Indore)	23	121	22	0	0	0	0	0	99
6.	Jag Jeewan Gram (Mahu)	12	67	17	0	0	0	0	2	48
7.	Nehru Van Gram (Mahu)	13	76	13	0	0	0	0	2	61
8.	Sendal (Mahu)	31	164	31	0	0	0	0	4	129
9.	Mendal (Mahu)	41	199	40	0	0	0	0	1	158
	<b>Cluster Villages</b>	139	741	0	0	0	0	0	0	589
10	Bercha (Mahu)	17	85	16	1	0	0	0	2	66
	<b>Control Village</b>	17	85	0	1	0	0	0	0	66
	<b>Total</b>	214	1185	225	3	0	1	0	22	934

5.131 The above table shows that 78.82 percent family members against the 1185 persons are within the income range of Rs. 1001 and above per month which is obvious as most of the farmers are pursuing agricultural occupations in viable manner with medium and large holdings.

#### AVERAGE MONTHLY EXPENDITURE

5.132 The table shows the details;

Table No. 5.49  
Average Monthly Expenditure

S. No.	Name of The Village	No. of families selected	No. of family member	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 and Above
1	2	3	4	5	6	7	8	9	10	11
1.	Mali Badodia (Indore)	20	104	17	0	0	0	0	3	84
2.	Indira Gram (Mahu)	12	94	11	0	2	1	0	9	71
3.	Gaginda (Mahu)	26	161	27	0	0	0	0	1	133
	<b>Adopted Village</b>	58	359	55	0	2	1	0	13	288
4.	Phool Karari (Indore)	19	114	19	0	0	0	0	1	94
5.	Bari Kalmer (Indore)	23	121	22	0	0	0	0	0	99
6.	Jag Jeewan Gram (Mahu)	12	67	12	0	0	0	0	6	49
7.	Nehru Van Gram (Mahu)	13	76	11	0	2	0	0	1	62
8.	Sendal (Mahu)	31	164	31	0	0	0	0	0	133
9.	Mendal (Mahu)	41	199	30	0	0	0	0	9	160
	<b>Cluster Village</b>	139	741	0	0	2	0	0	0	597
10	Bercha (Mahu)	17	85	15	1	1	2	0	1	65
	<b>Control Village</b>	17	85	0	1	1	2	0	0	65
	<b>Total</b>	214	1185	195	1	5	3	0	31	950

5.133 In line with information pertaining to income, 80.17 percent of family members are within the expenditure range of Rs. 1001.00 and above per month.

#### 5.134 To sum up

- **The percentage of males with the age group of 20 to 60 years, considered to be the labour force is 43.20 while that for females is 42.50 indicating the availability of eligible work force requiring employment opportunities.**
- **The percentage of dependent persons comprising of population within the age group of 0 to 10 years and 60 years and above who do not usually contribute towards family income is 13.44 in case of males and 31.79 percent in case of females, is within a fair limit particularly for males which is a positive demographic indicator.**
- **The literacy percentage being 67.08 in the sample area is higher than the state average of 64.11 percent. The overall educational status that emerges show the absorption capacity of the people of the sample area to adopt latest technology regarding agriculture introduced by the K.V.K.**
- **The bulk of the farming community consists of farmers and small farmers constituting 79.85 percent to total number of persons pursuing various main occupations that indicates the feasibility to implement various technology related to agriculture.**

- The near absence of activities relating to allied spheres of agriculture is not very uncommon in our area of study as, generally, in rural areas such activities particularly animal rearing is pursued on a very limited scale.
- In our sample area of study only 23 persons are engaged in secondary occupations which can not be termed as satisfactory.
- Regarding subsidiary occupations only 22 persons are engaged in various such occupations [1.86 percent to total household members] which is not at all meaningful.
- Regarding average monthly income, 78.82 percent family members against the 1185 persons are within the income range of Rs. 1001.00 and above per month that shows the affluence level of the area to some extent.
- Similarly 80.17 percent persons are within the expenditure range of Rs. 1001.00 and above per-month.

## RESULTS OF SURVEY

### SUBJECTS OF TRAINING RECEIVED– ADOPTED AND CLUSTER VILLAGES

5.135 At the outset it is necessary to clarify the point that there are 197 number of families out of the total number of 214 families [92.06 percent] who took part in vocational training, front line demonstration and on farm testing which are the three basic mandates of K.V.K. Therefore, the total of responding families from vocational training, front line demonstration and on farm testing will not tally with the figure of 197 as from this basic figure the families participated in three fundamental activities. The entire analysis is based upon family approach as normally one member from each family from adopted and cluster villages where there is direct intervention of K.V.K. takes part in various training programmes. In what follows an attempt has been made to present the item wise details of various initiatives adopted by K.V.K. in the fields of vocational training, front line demonstrations and on farm testing.

## VOCATIONAL TRAINING

5.136 The table below shows the details;

Table No. 5.50

Subjects of Training Received – Vocational Training.

S. No.	Name of Village	No. of Respondents	Subject on Which Training Received			
			Crop Prod Agronomy	Horticulture	Live stock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Mali Badodia(Indore)	20	20	7	2	0
2	Indira Gram (Mahu)	12	12	12	1	1
3	Gaginda (Mahu)	26	26	8	1	0
<b>I</b>	<b>Adopted Villages</b>	58	58	27	4	1
4	Phool Karari (Indore)	19	4	2	1	2
5	Bari Kalmer (Indore)	23	6	3	0	1
6	Jag Jeewan Gram (Mahu)	12	3	2	0	1
7	Nehru Van Gram (Mahu)	13	7	3	0	0
8	Sendal (Mahu)	31	12	4	0	0
9	Mendal (Mahu)	41	23	6	0	0
<b>II</b>	<b>Cluster Villages</b>	139	55	20	1	4
	<b>Total All Villages</b>	197	113	47	5	5

Table No. 5.50 [Contd...]

**Subjects of Training Received – Vocational Training.**

S. No.	Name of Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Water Shed Activities
1	2	8	9	10	11	12
1	Mali Badodia (Indore)	20	1	0	0	0
2	Indira Gram (Mahu)	12	0	0	2	5
3	Gaginda (Mahu)	23	0	0	8	9
I	<b>Adopted Villages</b>	55	1	0	10	14
4	Phool Karari (Indore)	19	1	0	0	0
5	Bari Kalmer (Indore)	23	0	1	3	0
6	Jag Jeewan Gram(Mahu)	12	0	0	0	1
7	Nehru Van Gram (Mahu)	13	0	0	3	1
8	Sendal (Mahu)	27	0	0	1	1
9	Mendal (Mahu)	41	1	1	7	3
II	<b>Cluster Villages</b>	135	2	2	14	6
	<b>Total All Villages</b>	190	3	2	24	20

**5.137** One very peculiar feature as revealed by the above table is that out of the total of 197 responding family, representatives from 190 families i.e. 96.45 percent to total responding families have responded to vocational training programmes relating to home science and by 113 families [57.36 percent] for crop production followed horticulture crops wherein 47 family representatives [23.86 percent] took part in vocational training. Marginal number of families attended the training programmes relating to livestock and dairying, fisheries, training of rural youth and agroforestry – the aggregate percentage of which is 7.61 to total responding families. On the subject of organic farming 24 families [12.18 percent] have responded to various vocational training programmes which is a positive indications that shows the awareness towards such activities. Similarly the response of 20 families [10.15 percent] towards watershed activities is indicative of the fact that villagers are becoming aware of the importance of water conservation. The maximum response for subject on home science is mainly due to the availability of ready market at Indore city.

**FRONT LINE DEMONSTRATION**

**5.138** The main objective of the front line demonstration is to demonstrate newly released crop production and protection technologies and its management practices in the farmer’s fields. However, in front line demonstrations, the interactions regarding home science activities, training of rural youth and all the other items as specified for vocational training are done to educate and support the farmers for augmentation of income. The table below shows the details;

Table No. 5.51  
Subjects of Training Received – Front Line Demonstration

S. No	Name of The Village	No. of Respondents	Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Mali Badodia (Indore)	18	18	3	0	0
2	Indira Gram (Mahu)	12	12	12	0	0
3	Gaginda (Mahu)	9	8	4	0	0
I	<b>Adopted Villages</b>	39	38	19	0	0
4	Phool Karari (Indore)	0	0	0	0	0
5	Bari Kalmer (Indore)	1	1	0	0	0
6	Jag Jeewan Gram (Mahu)	1	1	0	0	0
7	Nehru Van Gram (Mahu)	1	1	0	0	0
8	Sendal (Mahu)	2	2	0	0	0
9	Mendal (Mahu)	3	3	0	0	0
II	<b>Cluster Villages</b>	8	8	0	0	0
	<b>Total All Villages</b>	47	46	19	0	0

Table No. 5.51 [Contd...]

Subjects of Training Received – Front Line Demonstration

S. No.	Name of The Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Water Shed Activities
1	2	8	9	10	11	12
1	Mali Badodia (Indore)	0	0	0	0	0
2	Indira Gram (Mahu)	0	0	0	0	0
3	Gaginda (Mahu)	0	0	0	0	0
I	<b>Adopted Villages</b>	0	0	0	0	0
4	Phool Karari (Indore)	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0
II	<b>Cluster Villages</b>	0	0	0	0	0
	<b>Total All Villages</b>	0	0	0	0	0

5.139 The above table shows that out of total number of 197 responding families 47 households i.e. 23.86 percent to total households have responded to front line demonstrations, out of which in agronomical activities, 46 family representatives have taken part in various vocational trainings, followed by horticulture related activities where 19 family representatives have participated in vocational training organised by the K.V.K. **A total gap in participation on subjects like livestock and dairying, fisheries, agro-forestry, organic farming and watershed activities shows that cultivators are basically interested in enhancing their agriculture related productivity with basic understanding that once the income from agriculture is enhanced the other activities allied to agriculture will gradually develop.**

## ON FARM TESTING

5.140 In this practice the farmers participate in identifying problems and priorities and managing experiment and evaluating results. It is, therefore, an adaptive research with farmers perspective. The basic objective of on farm testing is to identify existing inputs or practices that might help to solve major problems of many farmers in a defined study area. The table below shows the details;

Table No. 5.52  
Subjects of Training Received – On Farm Testing

S. No.	Name of The Village	No. of Respondents	Subject On Which Training Received			
			Crop Prod Agronomy	Horticultu re	Live Stock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Mali Badodia (Indore)	4	4	0	0	0
2	Indira Gram (Mahu)	3	3	0	0	0
3	Gaginda (Mahu)	4	4	0	0	0
I	<b>Adopted Village</b>	11	11	0	0	0
4	Phool Karari (Indore)	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0
II	<b>Cluster Village</b>	0	0	0	0	0
	<b>Total All Villages</b>	11	11	0	0	0

Table No. 5.52 [Contd...]  
Subjects of Training Received – On Farm Testing

S. No.	Name of The Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Water-shed Activities
1	2	8	9	10	11	12
1	Mali Badodia (Indore)	0	0	0	0	0
2	Indira Gram (Mahu)	0	0	0	0	0
3	Gaginda (Mahu)	0	0	0	0	0
I	<b>Adopted Village</b>	0	0	0	0	0
4	Phool Karari (Indore)	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0
II	<b>Cluster Village</b>	0	0	0	0	0
	<b>Total All Villages</b>	0	0	0	0	0

- 5.141 The above table shows that out of the total of 197 responding families, only 11 households [5.58%] have responded to the programme. A large participation is not also expected as only bigger cultivators can afford getting such activity organised on their field.
- 5.142 **A complete absence of participation in most of the subjects is visualized except on the subject of crop production where cent-percent participation has been reported.**
- 5.143 **The basic facts as revealed by above narration are that most of the cultivators are interested in training programmes relating to crop production, horticulture, home science and watershed activities which have direct relevance to their income. Livestock and poultry activities and fisheries are the areas where the villagers have hardly any interest.**

### IMPACT OF K.V.K.

5.144 In the foregoing paragraphs the analysis of subject wise training received was presented. In what follows an attempt has been made to present the impact of individual items of training in the broad categories of;

- Vocational Training
- Front Line Demonstration
- On Farm Testing

**both before and after training [BT, AT] situations. This is the most important part of the report that clearly indicates the impact of K.V.Ks. intervention on agronomy, horticulture, livestock and dairying, fisheries, home science etc.**

### VOCATIONAL TRAINING – AGRONOMY - CEREALS

5.145 The table below shows the impact of K.V.K's. intervention over cereal crops;

Table No. 5.53  
Agronomy – Cereals

S.No.	Name Of The Village	Yield Per- Hectare - Kg.					
		Wheat			Paddy		
		No. Of Respondents	BT	AT	No. Of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Mali Badodia (Indore)	20	3735	4210	0	0	0
2	Indira Gram (Mahu)	12	2798	3425	0	0	0
3	Gaginda (Mahu)	26	3120	3295	0	0	0
I	<b>Adopted Village</b>	58					
4	Phool Karari (Indore)	3	3667	4300	0	0	0
5	Bari Kalmer (Indore)	5	3580	4280	0	0	0
6	Jag Jeewan Gram (Mahu)	3	3433	4167	0	0	0
7	Nehru Van Gram (Mahu)	5	3400	4120	0	0	0
8	Sendal (Mahu)	11	3609	4245	0	0	0
9	Mendal (Mahu)	22	3750	3897	0	0	0
II	<b>Cluster Village</b>	49					
	<b>Total All Villages</b>	107					



Table No. 5.53 [Contd...]

## Agronomy – Cereals

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Maize			Jowar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Mali Badodia (Indore)	9	2033	2578	5	1020	1380
2	Indira Gram (Mahu)	0	0	0	1	0	2100
3	Gaginda (Mahu)	15	1840	1987	23	1109	2427
I	<b>Adopted Villages</b>	24			29		
4	Phool Karari (Indore)	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0
8	Sendal (Mahu)	1	2000	2700	0	0	0
9	Mendal (Mahu)	19	1874	2111	10	920	1320
II	<b>Cluster Villages</b>	20			10		
	<b>Total All Villages</b>	44			39		

5.146 For Indore district wheat is the important crop followed by maize and jowar.

**5.147 Regarding wheat crop** the responding family representatives are 107 which is 54.31 percent to total 197 number of responding families who have shown interest in vocational training regarding wheat crop. **The yield per hectare in before training situations [B.T.] ranged between 2798 kg per hectare for village Indira Gram [adopted village] to 3750 kg/ha for village Mendal [cluster village] which are more than the district level and State level per hectare yields of 2698 kg and 1867 kg respectively. The after training [A.T.] scenario is much better wherein the per hectare yield ranged between 3295 kg per hectare for village Gaginda [adopted village] to 4300 kg per hectare for village Phool Karari [cluster village] – obviously much higher than the district and State average per hectare yield rates. The above fact clearly indicates the positive effects of vocational training imparted by the K.V.K. over the wheat crop.**

5.148 Regarding paddy crop no vocational training has been organised as the paddy is the least important crop of Indore district.

5.149 Regarding maize, though not important crop of Indore district, 44 number of families [22.34 percent] have participated in the vocational training programme with yield rates in B.T. situations ranging between 1840 kg per hectare for village Gaginda [adopted village] to 2023 kg, for village Mali Badodia [adopted village]. In AT situations the yield per hectare is much higher than B.T. situations, ranging between 2111 kg per hectare for village Mendal [cluster village] to 2700 kg for village Sendal [cluster villages] higher than district and state average figures of 1525 kg and 2072 kg respectively. The positive impact of the K.V.Ks. intervention is, thus, obvious.

5.150 Jowar again is not important crop of Indore district whereing 39 family representatives have taken part in vocational training from four number of villages with productivity in AT situations better than B.T. situations that ranged between 1320 kg per hect for village Mendal [cluster village] to 2427 kg for village Gaginda [adopted village] which are better than district and state average figures of 1354 kg and 1342 kg per hectare respectively far most of the villages.

### VOCATIONAL TRAINING – AGRONOMY – PULSES

5.151 The table below shows the details

Table No. 5.54  
Agronomy – Pulses

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Gram			Arhar			Lentil		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Mali Badodia (Indore)	17	980	1005	10	1225	1310	0	0	0
2	Indira Gram(Mahu)	5	985	1008	0	0	0	1	0	1005
3	Gaginda (Mahu)	10	998	1110	20	981	1410	0	0	0
I	<b>Adopted Villages</b>	32			30			1	0	
4	Phool Karari (Indore)	2	1005	1115	0	0	0	0	0	0
5	Bari Kalmer (Indore)	4	988	1120	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	3	1002	1121	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	2	988	1110	2	1000	1500	0	0	0
8	Sendal (Mahu)	4	991	1125	2	1200	1600	0	0	0
9	Mendal (Mahu)	16	1002	1131	16	1569	1894	0	0	0
II	<b>Cluster Villages</b>	31			20			0	0	0
	<b>Total All Villages</b>	63			50			1	0	

- 5.152 In pulses group gram and arhar are the important crops of Indore district. **Regarding Gram, against the total of 197 households, 63 households [31.98 percent] have participated in vocational training. The after training performance that resulted in per hectare yield ranging between 1005 kg for village Mali Badodia [adopted village] to 1131 kg for village Mendal [cluster village] is much higher than district and State average figures of 920 kg and 932 kg per hectare respectively.**
- 5.153 Regarding Arhar crop, 50 households [25.38 percent] have responded to vocational training which is reflected in enhanced productivity **in after training situations that ranged between 1310 kg per hectare for village Mali Badodia [adopted village] to 1894 kg for village Mendal [cluster village] far above than district and state average productivity of 656 kg and 825 kg per hectare respectively.**
- 5.154 Lentil being one of the minor crops of Indore district as only one household from village Indira Gram [adopted village] has participated in the vocational training programme **with per hectare yield of 1005 kg in AT situation which is higher than district level per hectare yield of 361 kg and state level per hectare yield of 506 kg.**

#### VOCATIONAL TRAINING – AGRONOMY – OIL SEEDS

5.155 The table below shows the details;

Table No. 5.55  
Agronomy – Oil Seeds

S.No.	Name of The Village	Yield Per- Hectare - Kg.					
		Soyabean			Mustard		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Mali Badodia (Indore)	20	1008	1184	0	0	0
2	Indira Gram (Mahu)	11	1121	1198	0	0	0
3	Gaginda (Mahu)	26	1005	1178	1	0	1700
I	<b>Adopted Village</b>	57			1	0	0
4	Phool Karari (Indore)	3	1009	1127	0	0	0
5	Bari Kalmer (Indore)	5	1400	1197	0	0	0
6	Jag Jeewan Gram (Mahu)	2	1006	1181	0	0	0
7	Nehru Van Gram (Mahu)	6	1110	1189	0	0	0
8	Sendal (Mahu)	8	1006	1179	0	0	0
9	Mendal (Mahu)	24	1003	1189	0	0	0
II	<b>Cluster Village</b>	48			0	0	0
	<b>Total All Villages</b>	105			1	0	0

- 5.156 Soybean being important crop of Indore district, 105 number of families constituting 53.30 percent to total of 197 responding families have participated in vocational training. **For every village the status of productivity in after training situation is better than before training position that shows the positive impact of vocational training programme organised by K.V.K. The per-hectare yield in after training situation ranged between 1127 kg per hectare in village Phool Karari [cluster village] to 1198 for village Indira Gram [adopted village] which are higher than the district and state average figures of 1070 kg and 1132 kg per hectare respectively.**
- 5.157 **Regarding Mustard crop only one household from village Gaginda [adopted village] took part in vocational training programme resulting in the yield rate of 1700 kg per hectare in after training situation which is higher than district and state average figures of 925 kg and 1009 kg per hectare respectively.**
- 5.158 The participation of households for receiving training on crops like cotton, sugarcane, linseed is nil that clearly indicates the lack of interest of cultivators of Indore district in pursuing the cultivation of these crops.

## HORTICULTURE

- 5.159 Horticulture crops are important from the view points of employment generation, checking of soil erosion and providing high density green cover to the soil. Being tough, many of these crops may be successfully grown on waste land not suitable for traditional crop cultivation. The table below shows the status of horticulture crop production in the sample area of our study;

Table No. 5.56  
Horticulture Crops

S.No	Name of The Village	Yield Per- Hectare - Quintal					
		Potato			Onion		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Mali Badodia (Indore)	6	223	277	0	0	0
2	Indira Gram (Mahu)	4	193	265	1	200	270
3	Gaginda (Mahu)	2	230	295	5	180	210
I	<b>Adopted Villages</b>	12			6		
4	Phool Karari (Indore)	2	220	280	0	0	0
5	Bari Kalmer (Indore)	2	215	300	1	200	260
6	Jag Jeewan Gram (Mahu)	0	0	0	1	230	270
7	Nehru Van Gram (Mahu)	0	0	0	1	220	280
8	Sendal (Mahu)	0	0	0	1	210	280
9	Mendal (Mahu)	2	220	290	0	0	0
II	<b>Cluster Villages</b>	6			4		
	<b>Total All Villages</b>	18			10		

Table No. 5.56 [Contd...]

## Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal					
		Tomato			Brinjal		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Mali Badodia(Indore)	4	115	186	2	125	201
2	Indira Gram (Mahu)	8	198	210	5	140	208
3	Gaginda (Mahu)	4	210	248	5	133	235
I	<b>Adopted Village</b>	16	62	2520	12		
4	Phool Karari (Indore)	3	190	225	1	210	230
5	Bari Kalmer (Indore)	3	193	233	3	180	231
6	Jag Jeewan Gram (Mahu)	0	0	0	1	137	208
7	Nehru Van Gram (Mahu)	1	180	240	0	0	0
8	Sendal (Mahu)	2	205	240	3	171	225
9	Mendal (Mahu)	6	198	243	5	151	227
II	<b>Cluster Village</b>	15			13		
	<b>Total All Villages</b>	31			25		

Table No. 5.56 [Contd...]

## Horticulture Crops

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Chilly			Bhindi			Spices		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	15	16	17	18	19	20	21	22	23
1	Mali Badodia (Indore)	1	220	270	6	105	190	0	0	0
2	Indira Gram(Mahu)	2	205	235	1	100	120	0	0	0
3	Gaginda (Mahu)	0	0	0	5	98	135	0	0	0
I	<b>Adopted Villages</b>	3			12			0	0	0
4	Phool Karari (Indore)	0	0	0	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	2	110	171	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	2	115	178	1	80	84
9	Mendal (Mahu)	0	0	0	3	117	181	0	0	0
II	<b>Cluster Villages</b>	0	0	0	7			1		
	<b>Total All Villages</b>	3	0	0	19			1		

- 5.160 The above table shows that in case of **Potato** 18 number of families have participated in the vocational training which is 9.14 percent to total of 197 responding families. For every village the per-hectare yield in after training situation is higher than before training conditions that ranged between 277 quintal per hectare for village Mali Badodia [adopted village] to 300 quintal per hectare for Bari Kalmer [cluster village]. These yield rates are much higher than the State average figure of 119 quintal per hectare. The positive impact of the efforts of the K.V.K., is, thus, obvious.
- 5.161 Regarding **Onion**, 10 number of households [5.08 percent] have responded to the vocational training, resulting in enhanced per-hectare yield in after training situations as compared to before training conditions that ranged between 210 quintal per-hectare for Gaginda [adopted village] to 280 quintal per hectare for villages Nehru-Van-Gram and Sendal [both cluster villages] which are much higher than State average figure of 140 quintal per hectare.
- 5.162 **Tomato** is yet another crop which is gradually picking-up at Indore as 31 families have participated in the vocational training constituting 15.74 percent to total of 197 families. The yield rates in after training conditions are higher than before training situations that ranged between 186 quintal per hectare for village Mali Badodia [adopted village] to 248 quintal per-hectare for village Gaginda [adopted village].
- 5.163 **Brinjal** too is a crop getting popular at Indore as 25 number of families [12.69 percent] have shown interest in training programme, the positive effects of which have been reflected in the form of enhanced per-hectare yield in after training situations as compared to before training conditions that ranged between 201 quintal per-hectare for village Mali Badodia [adopted village] to 235 quintal per-hectare for village Gaginda [adopted village].
- 5.164 **For Chilly crop**, only 3 families from two villages viz Mali Badodia and Indira Gram [both adopted villages] have taken part in vocational training with yield rates higher in after training conditions as compared to before training situations.
- 5.165 Similarly for **Bhindi crop**, 19 number of families [9.64 percent] have taken part in vocational training programme from six number of villages resulting in enhanced productivity in after training situations as compared to before training status that ranged between 120 quintal per-hectare for village Indira Gram [adopted village] to 181 quintal per-hectare for village Mendal [cluster village].
- 5.166 As regards **Spices crops**, only one household from village Sendal [cluster village] has taken part in the vocational training programme resulting in enhanced output per hectare in after training conditions as compared to before training situations.
- 5.167 **For crops like Cucurbits, Mango, Banana, Papaya and Citrus no vocational training programmes have been organised as the cultivators were not interested in producing such crops.**

#### **VOCATIONAL TRAINING – LIVESTOCK AND DAIRY**

- 5.168 Though these functions are important from the view points of both income augmentation and diversification of agriculture for reducing pressure on land in rural areas but in general such functions are not taken-up on viable scale with proper organizational skill as is evident from the information contained in the following table;

Table No. 5.57  
Live Stock and Dairying

S. No.	Name of Village	Milk production (Liters)						Artificial insemination NO. of animals		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT			
1	2	3	4	5	6	7	8			
1	Mali Badodia (Indore)	2	11	17	2	0	7			
2	Indira Gram (Mahu)	0	0	0	0	0	0			
3	Gaginda (Mahu)	0	0	0	0	0	0			
I	<b>Adopted Village</b>				2	0				
4	Phool Karari (Indore)	0	0	0	0	0	0			
5	Bari Kalmer (Indore)	0	0	0	0	0	0			
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0			
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0			
8	Sendal (Mahu)	0	0	0	0	0	0			
9	Mendal (Mahu)	0	0	0	0	0	0			
II	<b>Cluster Village</b>	0	0	0	0	0	0			
	<b>Total All Villages</b>	2	11	17	2	0				

Table No. 5.57 [Contd...]  
Live Stock and Dairying

S. No	Name of Village	Improved feeding management			Vaccination No.		
		No. of Respondents	Yes	No	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Mali Badodia (Indore)	2	2		2	0	6
2	Indira Gram (Mahu)	0	0	0	0	0	0
3	Gaginda (Mahu)	0	0	0	0	0	0
I	<b>Adopted Village</b>	2		0	2	0	
4	Phool Karari (Indore)	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0	0
II	<b>Cluster Village</b>	0	0	0	0	0	0
	<b>Total All Villages</b>	2	2	0	2	0	6

5.169 The above table shows that a total of 8 households have taken part in various functions of livestock and dairy activities constituting 1.06 percent to total of 197 households which is far from being encouraging.

- 5.170 **For milk production activities** only two family representatives from village Mali Badodia [adopted village] have participated in training programme resulting in slight enhancement of milk production in after training situations.
- 5.171 Similarly for **artificial insemination** two number of families from village Mali Badodia [adopted village] have taken part in vocational training resulting in insemination of 7 number of animals in after training situations.
- 5.172 Regarding **improved feeding management** again two number of families from village Mali Badodia [adopted village] have adopted improved feeding management practices.
- 5.173 Similarly for **vaccination of livestock** two family representatives from village Mali Badodia [adopted village] have taken part in vocational training leading to vaccination of 6 number of livestock in after training situation.
- 5.174 The conclusion that can be drawn from above narration is that the livestock and dairy activities though important functions, are not popular in our sample area of study mainly because of the paucity of expert services and lack of road connectivity hampering the marketing of the product.**

#### VOCATIONAL TRAINING – HOME SCIENCE

- 5.175 Vocational training in Home Science activities like toy making, preparation of pickles and jute items, preparation of papad/bari/jam/jelly etc. are important from both income support and employment generation point of views engaging women and old people in rural areas. The table below shows the details;

Table No. 5.58  
Home Science Activities

S. No	Name of The Village									
		Pickle, Kg.			Bakery, Kg.			Papad/Badi/Jam/Jelly, Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Mali Badodia (Indore)	20	14	76	0	0	0	16	1	39
2	Indira Gram(Mahu)	12	5	37	1	4	0	12	0	20
3	Gaginda (Mahu)	23	14	96	0	0	0	19	2	48
I	<b>Adopted Villages</b>	55	33	209	1	4	0	47	3	107
4	Phool Karari (Indore)	19	3	69	1	5	0	19	5	56
5	Bari Kalmer (Indore)	23	5	77	0	0	0	23	5	63
6	Jag Jeewan Gram (Mahu)	12	21	60	0	0	0	4	0	8
7	Nehru Van Gram (Mahu)	13	17	63	0	0	0	0	0	0
8	Sendal (Mahu)	28	23	101	0	0	0	19	2	38
9	Mendal (Mahu)	40	13	110	0	0	0	37	5	85
II	<b>Cluster Villages</b>	135	82	480	1	5	0	102	17	250
	<b>Total All Villages</b>	190	115	689	2	9	0	149	20	357



- 5.176 Preparation of **Pickles** is an item getting popular in rural areas as 190 number of family representatives have taken part in the vocational training constituting 96.45 percent of total of 197 responding families with production of 689 kgs of pickle in after training situation as compared to 115 kgs of pickle in before training conditions. The impact of K.V.Ks. effort is clearly visible.
- 5.177 Regarding preparation of **bakery items** which is not very popular in our sample area of study, only 2 number of households from villages Indira Gram [adopted village] and Phoot Karari [cluster village] have taken part in vocational training **with nil production in after training situation that clearly shows the lack of interest of sample household in pursuing such occupation.**
- 5.178 **Regarding preparation of paper/badi/jam/jelly etc.,** which is becoming popular activity in rural area of our study mainly due to portability of the product, 149 household [75.63 percent] have taken part in vocational training organised by the K.V.K. with production of 357 kg in after training situation as compared to only 20 kg in before training conditions **that underlines the positive impact of the K.V.Ks. efforts.**

#### VOCATIONAL TRAINING – ORGANIC FARMING

5.179 The table below shows the details;

Table No. 5.59  
Organic Farming

S. No.	Name of The Village	Compost by NADEP method (Nos.)			Bio-pesticide, Liter		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Mali Badodia (Indore)	5	0	5	0	0	0
2	Indira Gram(Mahu)	0	0	0	0	0	0
3	Gaginda (Mahu)	0	0	0	0	0	0
I	<b>Adopted Village</b>	5	0	5	0	0	0
4	Phool Karari (Indore)	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0	0
9	Mendal (Mahu)	1	0	1	1	0	8
II	<b>Cluster Village</b>	1	0	1	1	0	8
	<b>Total All Villages</b>	6	0	6	1	0	8

- 5.180 The practice of organic farming is gradually picking up in our area of study as 6 number of households from villages Mali Badodia [adopted village] and Mendal [cluster village] have participated in the training programme relating to **preparation of compost by NADEP method** with construction of 6 numbers of NADEP structure in after training situation as compared to nil performance in before training conditions.
- 5.181 Regarding preparation of bio-pesticide only one household from village Mendal [cluster village] has taken part in the training with production of 8 liters of bio-pesticide in after training situation as compared to nil performance in before training conditions.

- 5.182 Normally the organic farming practices are followed either by government farms or big cultivators, therefore extensive response for this practice can not be expected. A beginning has already been done in our sample area of study which perhaps, will pick-up popularity in due course.
- 5.183 No vocational training has been organised on subjects like poultry and fishery development training of rural youth, agro forestry and watershed activities which are important functions from the view point of income augmentation in rural areas.
- 5.184 In the following paragraphs an attempt has been made to sum-up the efforts of vocational training imparted by the K.V.K.
- Regarding the yield per hectare both for agronomical and horticultural crops the after training situation is better than before training conditions that clearly shows the positive impact of vocational training imparted by the K.V.K.
  - In case of wheat crop where the response is 54.31 percent to total of 197 responding families wherein the per hectare yield for all the 9 number of villages in after training situation is better than before training conditions and more than district and state average yield rates for both in BT and AT conditions.
  - Regarding maize crop where the participation is 22.34 percent to total responding families the yield per hectare is much higher than the district and state averages.
  - Jowar, though not important crop of Indore district, the percentage participation in vocational training is 19.80 percent to total of 197 responding families with productivity in after training situation higher than district and state average per hectare yields.
  - Regarding gram crop, 31.98 percent households have participated in vocational training programme, the yield per hectare in after training situation is higher than average productivity of district and state levels.
  - Similarly regarding Arhar crop wherein 25.38 percent households have responded to vocational training, the per hectare yield in after training situation is far above than district and state average productivity.
  - Lentil being one of the minor crops of Indore district only one household has participated in vocational training programme with per hectare yield higher than district and state averages in after training situation.
  - Soybean being important crop of Indore district wherein 53.30 percent households have participated in vocational training with yield per hectare higher than district and state average productivity in after training situations.
  - Regarding Mustard crop only one household has participated in the training from village Gaginda [adopted village] with yield rates higher than district and state average productivity in after training situation.
  - The participation of households for receiving training on crops like cotton, sugarcane, linseed is nil.
  - In the group of horticulture crop, production of potato is important, accounting for the involvement of 9.14 percent households with productivity higher than district and state average productivity in after training situations.
  - Other important horticulture crops of the district are Onion, Tomato, Brinjal and Bhindi wherein 5.08 percent, 15.74 percent, 12.69 percent and 9.64 percent households respectively have participated in vocational training with the yield rates much higher in after training situations as compared to before training conditions. An intensive effort is, perhaps required to persuade the cultivators to take-up cultivation of horticulture on bigger scale as these crops give income support to families.

- A total of only 8 households have taken part in various activities relating to livestock and dairying with hardly any performance in after training situations. These activities being important factors of income augmentation in rural areas, more efforts are required by the K.V.K. functionaries to popularize these occupations.
- For home science the important constituents are preparation of pickles and papad/bari/jam/jelly etc. wherein 96.45 percent and 75.63 percent households respectively have participated in vocational training with good performance in after training conditions. Such activities, if encouraged more may enhance family income to startling limits.
- Organic farming is one area which is gradually picking-up in our area of study. However, a leap forward is not expected as the activities relating to organic farming are more concerned with big cultivators.
- No vocational training has been organised on subjects like poultry and fishery development, training of rural youth, agro-forestry and watershed activities which are important functions from the view point of income augmentation in rural areas.
- The impact of the efforts of Krishi Vigyan Kendra is assessed through results of various vocational training programmes, front line demonstration and on farm testing. If on any subject the trainings and demonstrations have not been arranged, the impact will not be visible. For example since the vocational training on subjects like poultry and fishery development, training of rural youth, agro-forestry and watershed activities have not been organised then the impact of these subjects will not be visible. Therefore, the impact of rain water conservation, water management, reclamation/restoration of degraded soils/lands and degree of adoption for non-land based enterprises will not be reflected.

#### FRONT LINE DEMONSTRATION – AGRONOMY CEREALS

5.185 Front line demonstrations [FLD] are organized on farmer's field with the result the response is bound to be low as compared to vocational training. The table below shows the impact of front line demonstrations on cereal crops.

Table No. 5.60  
Agronomy – Cereals

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Maize		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Mali Badodia (Indore)	14	3543	4286	0	0	0
2	Indira Gram (Mahu)	12	3650	4058	0	0	0
3	Gaginda (Mahu)	3	3667	4433	1	1700	2400
I	<b>Adopted Village</b>	29			1		
4	Phool Karari (Indore)	0	0	0	0	0	0
5	Bari Kalmer (Indore)	1	3400	4500	0	0	0
6	Jag Jeewan Gram (Mahu)	1	3500	4400	0	0	0
7	Nehru Van Gram (Mahu)	1	3400	4200	0	0	0
8	Sendal (Mahu)	0	0	0	0	0	0
9	Mendal (Mahu)	1	3500	4400	0	0	0
II	<b>Cluster Village</b>	4			0	0	0
	<b>Total All Villages</b>	33			1		

- 5.186 The front line demonstrations for the **wheat crop** have been organized on the fields of 33 cultivators which is 16.75 percent to total of 197 responding families. The per hectare yield in after training situation is much higher than before training conditions that ranged between 4200 kg. per hectare for the village Nehru Van Gram [cluster village] to 4500 kg per hectare for village Bari Kalmer [cluster village] far in excess of district average of 2698 kg and state average of 1867 kg. The positive impact of the efforts of K.V.K. is clearly visible.
- 5.187 Regarding **Maize crop** only one demonstration has been organised in village Gaginda [adopted village] with per hectare yield of 2400 kg in after training situation which is not only higher than the productivity in before training situation but in excess of district and state average productivities of 1525 kg and 2072 kg per hectare respectively. **However matching to vocational training, a few more F.L.Ds. should have been organised.**
- 5.188 **No F.L.Ds. have been organised for crops like paddy and Jowar. Paddy being an unimportant crop of Indore district the lack of response seems natural but for Jowar crop, usually grown by poor cultivators, the F.L.Ds. should have been organised as the response to vocational training for this crop is quite satisfactory.**

## AGRONOMY - PULSES

- 5.189 The table below shows the details;

Table No. 5.61  
Agronomy – Pulses

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Gram			Arhar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Mali Badodia (Indore)	5	1420	1800	1	1100	1500
2	Indira Gram (Mahu)	6	1300	1366	1	1600	1700
3	Gaginda (Mahu)	1	1200	1700	1	1400	1800
I	<b>Adopted Village</b>	12			3		
4	Phool Karari (Indore)	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0	0
II	<b>Cluster Village</b>	0	0	0	0	0	0
	<b>Total All Villages</b>	12			3		

- 5.190 **Gram being** one of the important crops of Indore district, 12 number of front line demonstration [F.L.Ds.] have been organised [all in adopted villages] which is 6.09 percent to total of 197 responding families with better performance in after training situation as compared to before training conditions. The per hectare yield in after training situation ranged between 1366 for Indira Gram [adopted village] to 1800 kg for Mali Badodia [adopted village] which are higher than the district average productivity figure of 920 kg and similar state level figure of 932 kg. **The remarkable feature that may be noted is that compared to vocational training, the per hectare yield in after training situation in case of F.L.D. areas is higher that again shows the positive effect of F.L.Ds. However a few F.L.Ds. should have been organised for cluster villages as well for wider impact of F.L.D. activities.**

**5.191 Regarding Arhar crop** only 3 number of F.L.Ds. have been organised [all in adopted villages] resulting in crop productivity which is higher in after training situation as compared to before training conditions and far in excess of average district and state level productivity per hectare accounting for 656 kg and 825 kg respectively. **Here again the yield per hectare for F.L.D. areas in after training situation is higher than the villages where vocational trainings have been organised. However for Arhar crops also, a few F.L.Ds. should have been organised for cluster villages as well for wider impact.**

## AGRONOMY – OIL SEEDS

5.192 The table below shows the details;

Table No. 5.62  
Agronomy – Oil Seeds

Sl. No.	Name of the Village	Yield Per- Hectare - Kg. -Soybean		
		No. of Respondents	BT	AT
1	Mali Badodia (Indore)	5	1225	1560
2	Indira Gram (Mahu)	12	1193	1914
3	Gaginda (Mahu)	2	1149	1971
<b>I</b>	<b>Adopted villages</b>	19		
4	Phool Karari (Indore)	0	0	0
5	Bari Kalmer (Indore)	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0
8	Sendal (Mahu)	2	1189	2014
9	Mendal (Mahu)	2	1210	1981
<b>II</b>	<b>Cluster villages</b>	4		
	<b>Total all villages</b>	23		

5.193 Soybean being one of the important crops of Indore district, the number of 23 F.L.Ds. [11.68 percent to total of 197 responding families] have been organised with yield rates ranging between 1560 kg per hectare for village Mali Badodia [adopted village] to 2014 kg per hectare for village Sendal [cluster village] in after training situations which are far ahead of district average productivity of 1070 kg and state average productivity of 1132 kg. **Again the yield per hectare of F.L.D. areas in after training situation is higher than the villages where vocational trainings have been organised.**

- No FLDs have been organized for crops like Mustard, Cotton, Sugarcane and Linseed as these crops are not important for Indore district.

## HORTICULTURE

5.194 The table below shows the details;

Table No. 5.63  
Horticulture Crops

S.No	Name of The Village	Yield Per- Hectare - Quintal					
		Tomato			Brinjal		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Mali Badodia (Indore)	2	190	240	1	180	270
2	Indira Gram (Mahu)	7	140	221	5	176	257
3	Gaginda (Mahu)	3	213	253	2	190	290
I	<b>Adopted Village</b>	12			8	176	257
4	Phool Karari (Indore)	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0	0
II	<b>Cluster Village</b>	0			0	0	0
	<b>Total All Villages</b>	12			8		

Table No. 5.63 [Contd...]  
Horticulture Crops

S. No	Name of The Village	Yield Per- Hectare - Quintal								
		Chilli			Bhindi			Cucurbits		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Mali Badodia (Indore)	0	0	0	1	100	120	0	0	0
2	Indira Gram(Mahu)	2	205	235	0	0	0	0	0	0
3	Gaginda (Mahu)	1	220	248	0	0	0	1	100	120
I	<b>Adopted Villages</b>	3			1			1		
4	Phool Karari (Indore)	0	0	0	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0	0	0	0	0
II	<b>Cluster Villages</b>	0			0			0		
	<b>Total All Villages</b>	3			1			1		

5.195 **Tomato** is one of the horticultural crops which is picking-up in Indore district as is evident from the fact that 12 number of F.L.Ds. have been organised all in adopted villages with productivity in after training situation higher than before training situation, having range distribution of 140 kg per hectare in village Indira Gram to 213 kg per hectare for village Gaginda. A few F.L.Ds. should have also been organised in cluster villages as well.

- 5.196 **Regarding Brinjal** crop, 8 number of F.L.Ds. have been organised in all the adopted villages with better performance in after training situations as compared to before training conditions. The yield rates in after training situations ranged between 257 kg per hectare for village Indira Gram to 290 kg per hectare for village Gaginda. However, a few F.L.Ds. should have been organised for cluster villages as well for wider positive impact.
- 5.197 Regarding **Chilly crop** only 3 F.L.Ds. have been organised in two adopted villages with yield rates higher in after training situation as compared to before training conditions.
- 5.198 Similarly for crops like **Bhindi and Cucurbits** one each F.L.Ds. have been organised in villages Mali Badodia and Gaginda respectively [both adopted villages] with yield rates per hectare higher in after training situation as compared to before training situations.
- 5.199 **No F.L.Ds. have been organised for crops like Potato, Onion, Spices, Mango, Banana, Papaya and Citrus crops. Potato and Onion being important crops from demand point of view, a few number of F.L.Ds. should have been organised. More over horticulture crops give income support to farming families with ready market that call for more training emphasis for these crops along with organisation of F.L.Ds.**
- 5.200 **Regarding subjects like livestock and dairying, poultry, fisheries development, home science activities, agro-forestry, organic farming and watershed activities no F.L.Ds. have been organised. All the above mentioned activities are important for any rural economy, particularly the subjects like livestock, dairying and agro forestry and watershed activities are important from the view points of income augmentation and enhancement of agriculture production. F.L.Ds, therefore, should have been organised for such activities.**
- 5.201 **To sum-up**
- **Front Line Demonstrations organised in our area of study has lead to enhancement in productivity of most of the agronomical and horticultural crops in after training situations as compared to before training situations which show the positive impact of K.V.Ks. efforts.**
  - **In case of wheat crop 33 number of F.L.Ds. have been organised that lead to productivity far excess of district and state average productivity, particularly in after training situations.**
  - **Regarding Maize crop only one demonstration has been organised with per-hectare yield higher than district and state average productivity in after training situation.**
  - **No F.L.Ds. have been organised for paddy and jowar crops. F.L.Ds. should have been organised for Jowar crop which is usually grown by poor cultivators and for which response regarding vocational training is satisfactory.**
  - **As regards Gram crop 12 number of F.L.Ds. have been organised with better performance in after training situations that lead to higher productivity as compared to average productivity at district and state levels.**
  - **Soybean being one of the important crops of Indore district, 23 F.L.Ds. have been organised with better performance in after training situations leading to higher yield per hectare as compared to district and state average productivity.**
  - **Regarding horticultural crops like Tomato, Brinjal, Chilly, Bhindi and Cucurbits for which 12,8,3,1,1 number respectively of F.L.Ds. have been organised with better performance in after training situations as compared to before training conditions.**

- No F.L.Ds. have been organised for crops like Potato, Onion, Spices, Mango, Banana, Papaya and Citrus crops. A few number of F.L.Ds. should have been organised for potato and onion being common items of consumption with ready market.
- No F.L.Ds. have been organised on subjects like livestock and dairying, poultry, fishery development, home science agro-forestry, organic farming and watershed activities which are important functions of any rural economy. F.L.Ds. should be organised on subjects like livestock and dairying, agro-forestry and watershed activities which have direct relevance to income augmentation and enhancement of agricultural production.
- Since F.L.Ds. are measures of learning by doing, more extensive implementation of this mandate must be attempted matching to vocational training. What is actually required is to plan out the F.L.Ds. much in advance in consultation with concerned district authorities of line departments like agriculture, horticulture and Chief Executive Officer of Zila Panchayat so that an understanding of State Plan priorities are reflected over such advance planning. The vocational training may thus be organised to provide a basic classroom knowledge regarding subjects on which F.L.Ds. are to be organised so that farmers are equipped with ready knowledge. After this step, the F.L.Ds. may be organised which will immensely help the cultivators to implement the technology.
- Since no F.L.Ds. have been organised on subjects like livestock and dairying, poultry, fishery development, agro-forestry, organic farming and watershed activities the impact F.L.D. for these subjects will not be visible.

#### ON FARM TESTING [OFT] - CEREALS

5.202 In case of On Farm Testing, recommended new technologies are tested on farmer's fields leading to the solution of group of farming problems. The extent of response is bound to be low as the new technologies are always limited in numbers.

5.203 The table below shows the details;

Table No. 5.64  
Cereal Crops – Wheat

Sl. No.	Name of the Village	Yield Per- Hectare - Kg.		
		No. of Respondents	BT	AT
1	Mali Badodia (Indore)	1	4000	4500
2	Indira Gram (Mahu)	1	3600	4000
3	Gaginda (Mahu)	1	3600	4400
<b>I</b>	<b>Adopted villages</b>	3		
4	Phool Karari (Indore)	0	0	0
5	Bari Kalmer (Indore)	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0
8	Sendal (Mahu)	0	0	0
9	Mendal (Mahu)	0	0	0
<b>II</b>	<b>Cluster villages</b>	0		
	<b>Total all villages</b>	3		

5.204 In case of Wheat, 3 number of on farm testing activities have been organised [all in adopted villages] with substantial yield per hectare in after training situation that ranged between 4000 kg per hectare for village Indira Gram to 4500 kg per-hectare for village Mali Badodia which are much higher than the district average per hectare productivity of 2698 kg and state average figure of 1867 kg.



5.205 In non-other cereal crops like Maize and Jowar the O.F.Ts. have been organised, which perhaps should have been done looking to the satisfactory response of vocational training for these crops.

#### ON FARM TESTING – PULSES CROP

5.206 The table below shows the details;

Table No. 5.65  
Pulses Crop

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Gram			Arhar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Mali Badodia (Indore)	1	1400	1800	1	1400	1800
2	Indira Gram (Mahu)	1	1400	1600	0	0	0
3	Gaginda (Mahu)	1	1200	1809	1	1400	1900
I	<b>Adopted Village</b>	3			2		
4	Phool Karari (Indore)	0	0	0	0	0	0
5	Bari Kalmer (Indore)	0	0	0	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0	0	0	0
8	Sendal (Mahu)	0	0	0	0	0	0
9	Mendal (Mahu)	0	0	0	0	0	0
II	<b>Cluster Village</b>	0			0		
	<b>Total All Villages</b>	3			2		

5.207 Gram being one of the important crops of Indore district, 3 O.F.Ts. have been organised [all in adopted villages] with productivity ranging between 1600 kg per hectare for village Indira Gram to 1809 kg for village Gaginda in after training situations which are higher than before training conditions and far in excess of district average productivity of 920 kg per hectare and state average productivity of 932 kg per hectare.

5.208 Similarly, for Arhar crop two number of O.F.Ts. have been organised in two adopted villages of Mali Badodia and Gaginda with yields per hectare in after training situations which are far in excess of district level and state level per hectare yields of 656 kg and 825 kg respectively.

## ON FARM TESTING – OIL SEED CROP

5.209 The table below shows the details;

Table No. 5.66  
Oil Seed Crop - Soybean

Sl. No.	Name of the Village	Yield Per- Hectare - Kg.		
		No. of Respondents	BT	AT
1	Mali Badodia (Indore)	1	1300	1535
2	Indira Gram (Mahu)	1	1350	1970
3	Gaginda (Mahu)	1	1250	1981
<b>I</b>	<b>Adopted villages</b>	3		
4	Phool Karari (Indore)	0	0	0
5	Bari Kalmer (Indore)	0	0	0
6	Jag Jeewan Gram (Mahu)	0	0	0
7	Nehru Van Gram (Mahu)	0	0	0
8	Sendal (Mahu)	0	0	0
9	Mendal (Mahu)	0	0	0
<b>II</b>	<b>Cluster villages</b>	0		
	<b>Total all villages</b>	3		

5.210 Soybean being one of the important crops of Indore district, 3 number of O.F.Ts. have been organised in three identified adopted villages with much higher yield rates in after training situations as compared to district and state level per hectare yields of 1070 kg and 1132 kg respectively.

5.211 No O.F.T. has been organised for crops like paddy, maize, lentil, jowar, mustard, cotton, sugarcane and linseed which are not important crops of Indore district.

**5.212 Surprisingly, no O.F.T. has been organised for any of the horticulture crops which obviously is a gap in performance. The O.F.Ts. should have been organised for crops like Potato, Onion, Tomato and Brinjal for which there is good response in vocational training courses. Besides, horticultural crops are good source of income which are gradually becoming popular in Indore district. The measures of O.F.Ts. would have boosted-up the productivity levels of such crops along with enhancement of family income.**

**5.213 No. O.F.Ts. have been organised for subjects like livestock and dairying, poultry, fishery development, agro-forestry, organic farming and watershed activities. A few O.F.Ts. should have been organised for livestock and dairying, agro forestry and watershed activities which have scope in our sample area of study.**

**5.214 In the following paragraphs summing-up efforts have been made for the results of O.F.T.**

- **In case of O.F.T., the yield per-hectare in after training situation is more than before training conditions as has occurred for both vocational training and front line demonstrations which shows the positive impact of K.V.Ks. efforts.**
- **The O.F.Ts. have been organised only in adopted villages whereas a few O.F.Ts. should have been organised in cluster villages also to have wider impact.**

- No O.F.T. has been organised for any of the horticulture crops which certainly shows the deficiency in performance. A few O.F.Ts. must have been organised for horticulture crops like potato, onion and and tomato etc. which are common items of consumption.
- Since no O.F.Ts. have been organised on subjects like livestock and dairying, poultry, fishery development, agro-forestry, organic farming and watershed activities, the impact of O.F.T. relating to such subjects is obviously not visible.

#### STATUS OF ACTIVITIES IN CONTROL VILLAGE – BERCHA

5.215 The study has identified one control village i.e. Bercha with 17 number of sample households and 85 sample family members where there is no interventions of K.V.K. The information regarding common items of agronomical and horticulture crops have been collected to show the comparative status in areas of intervention and non-intervention. However, in case of control village before and after training situations have not been shown as there is no effort of K.V.K. in this village. **For comparison, the average performance of vocational training in after training situation has been taken as the participation regarding all subjects is maximum in case of vocational training.** The table below shows the comparative status of control village on one side and adopted and cluster villages on other side.

Table No. 5.67

#### Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3294.00	3993.22	(+) 699.22
2	Maize	1688.00	2344.00	(+) 656.00
3	Jowar	738.00	1806.75	(+) 1068.75
<b>PULSES</b>				
4	Gram	1005.00	1093.89	(+) 88.89
5	Arhar	1038.00	1542.80	(+) 504.80
6	Lentil	-	1005.00	-
<b>OIL SEEDS</b>				
7	Soybean	1091.00	1180.22	(+) 89.22
8	Mustard	-	1700.00	-
<b>HORTICULTURE CROPS – QUINTAL</b>				
9	Potato	197.00	284.50	(+) 87.50
10	Onion	197.00	261.67	(+) 64.67
11	Tomato	164.00	228.13	(+) 64.13
12	Brinjal	183.00	220.63	(+) 37.63
13	Chilly	-	252.50	-
14	Bhindi	100.00	162.50	(+) 62.50
15	Cucerbites	85	-	-

5.216 The above information clearly shows the better performance in adopted and cluster villages with interference of K.V.K. as compared to control village. For every crop the per hectare yields, due to training efforts of K.V.K. are more than the per hectare yield of control village. The difference in per hectare yield is substantial in cases of crops like Jowar, Wheat, Maize and Arhar where the per hectare yields in adopted and cluster villages have exceeded by 1068.75 kg, 699.22 kg, 656.00 kg and 504.80 kg respectively.

5.217 In the field of home science activities particularly for activities like preparation of pickles and papad/badi/jam/jelly etc. substantial work has been done in adopted and cluster villages through the intervention of K.V.K. whereas such activities are totally missing in control village. These activities are important both from income augmentation and employment point of views.

5.218 Like vocational training programme no work has been done in control village on activities like poultry and fishery development, training of rural youth, agro-forestry and watershed activities which are important functions for development of any rural economy.

### RESULTS OF SURVEY – INDIVIDUAL PARTICULARS ADOPTED AND CLUSTER VILLAGES

5.219 In the following paragraphs an attempt has been made to highlight the various reactions of 25 percent of individuals taken from the sample family members. The total number of sample family members as reported is 1185 for adopted, cluster and control villages, the 25 percent of which comes to 296 individuals. The following table gives the break-up;

Table No. 5.68  
Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	359	91
2	Cluster Villages	741	184
3	Control Village	85	21
	<b>Total</b>	<b>1185</b>	<b>296</b>

5.220 Though the 25 percent of 359 comes to 89.75 [say 90] and of 741, 185, but we have taken figures of 91 and 184 respectively because of certain demographic particulars. However, a figure or two plus or minus is hardly meaningful so long it does not vitiate the survey results.

5.221 In the following paragraphs an attempt has been made to highlight the individual reactions in **adopted and cluster villages** i.e. for **275 individuals**.

5.222 The criteria for selection of individuals are as follows;

- The individual should be the adult member of the family.
- He should be associated with any programme of K.V.K. For individuals of control village, this criterion is not applicable.
- He/She should be literate, may be without having any formal education.

### SOCIAL CLASSIFICATION OF INDIVIDUALS

5.223 The table below shows the details;

Table No. 5.69  
Social Classification

S. No.	Name of the Village	No. of Individual	Social classification			
			S.T.	S.C.	O.B.C.	GENERAL
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	27	2	1	17	7
2.	Indira Gram (Mahu)	24	0	15	9	0
3.	Gaginda (Mahu)	40	40	0	0	0
	<b>Adopted Village</b>	91	42	16	26	7
4.	Phool Karari (Indore)	28	2	0	7	19
5.	Bari Kalmer (Indore)	30	0	7	6	17
6.	Jag Jeewan Gram (Mahu)	17	0	17	0	0
7.	Nehru Van Gram (Mahu)	19	0	19	0	0
8.	Sendal (Mahu)	40	29	2	7	2
9.	Mendal (Mahu)	50	50	0	0	0
	<b>Cluster Village</b>	184	81	45	20	38
	<b>Total</b>	275	123	61	46	45

5.224 The above table shows that the majority of 123 individuals are from S.T. community that accounts for 44.73 percent to total of 275 individuals from adopted and cluster villages. The combined percentage of S.C. and O.B.C. communities is 38.91 while the members from general communities constitute 16.36 percent to total individuals. **Thus the entire area of adopted and cluster villages is predominated by scheduled tribe population that throws a challenge to K.V.K. Scientists to achieve tangible results for bringing this vulnerable community to main stream of development.**

#### INDIVIDUALS CLASSIFIED ON THE BASIS OF RELIGION

5.225 The following table gives the details;

Table No. 5.70  
Classification on the Basis of Religion

S. No.	Name of the Village	No. of Individual	Religion					
			Hindu	Muslim	Sikh	Christian	Nauabudh	Others
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	27	27	0	0	0	0	0
2.	Indira Gram (Mahu)	24	24	0	0	0	0	0
3.	Gaginda (Mahu)	40	40	0	0	0	0	0
	<b>Adopted Village</b>	91	91	0	0	0	0	0
4.	Phool Karari (Indore)	28	28	0	0	0	0	0
5.	Bari Kalmer (Indore)	30	30	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	17	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	19	19	0	0	0	0	0
8.	Sendal (Mahu)	40	40	0	0	0	0	0
9.	Mendal (Mahu)	50	50	0	0	0	0	0
	<b>Cluster Village</b>	184	184	0	0	0	0	0
	<b>Total</b>	275	275	0	0	0	0	0

5.226 The above table shows that cent-percent individuals are the followers of Hindu religion.  
**AWARENESS ABOUT THE K.V.K.**

5.227 The table below shows the details;

Table No. 5.71  
Awareness About the K.V.K.

S. No	Name of the Village	No. of Individual	Awareness about existence of K.V.K.		If 'yes' knowledge about its location		Awareness about services rendered by the K.V.K.	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	27	27	0	27	0	27	0
2.	Indira Gram (Mahu)	24	24	0	24	0	24	0
3.	Gaginda (Mahu)	40	40	0	40	0	40	0
	<b>Adopted Village</b>	91	91	0	91	0	91	0
4.	Phool Karari (Indore)	28	28	0	28	0	28	0
5.	Bari Kalmer (Indore)	30	30	0	30	0	30	0
6.	Jag Jeewan Gram (Mahu)	17	17	0	17	0	17	0
7.	Nehru Van Gram (Mahu)	19	19	0	19	0	19	0
8.	Sendal (Mahu)	40	40	0	40	0	40	0
9.	Mendal (Mahu)	50	50	0	50	0	50	0
	<b>Cluster Village</b>	184	184	0	184	0	184	0
	<b>Total</b>	275	275	0	275	0	275	0

5.228 The cent percent awareness about K.V.K. in terms of its location and more importantly the services rendered by it is undoubtedly an encouraging indication that indicates the fruitful efforts of K.V.K. scientists in their stride to popularise the functions of K.V.K.

#### KNOWLEDGE ABOUT SPECIFIC SERVICES RENDERED BY K.V.K.

5.229 The table below shows the details;

Table No. 5.72  
Specific Services Rendered by the K.V.K.

S. No	Name of the Village	No. of Individual	knowledge about vocational		knowledge about front line demonstration training		knowledge about on farm testing	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	27	27	0	27	0	27	0
2.	Indira Gram (Mahu)	24	24	0	24	0	24	0
3.	Gaginda (Mahu)	40	40	0	40	0	40	0
	<b>Adopted Village</b>	91	91	0	91	0	91	0
4.	Phool Karari (Indore)	28	28	0	0	28	0	28
5.	Bari Kalmer (Indore)	30	30	0	18	12	11	19
6.	Jag Jeewan Gram (Mahu)	17	17	0	6	11	6	11
7.	Nehru Van Gram (Mahu)	19	19	0	3	16	3	16
8.	Sendal (Mahu)	40	40	0	24	16	12	28
9.	Mendal (Mahu)	50	50	0	8	42	8	42
	<b>Cluster Village</b>	184	184	0	59	125	40	144
	<b>Total</b>	275	275	0	150	125	131	144

5.230 Regarding **Vocational Training** the cent percent awareness of the individuals from adopted and cluster villages seems obvious as participation of households in such training programmes is maximum.

- 5.231 The absence of any knowledge about front line demonstrations among 125 individuals which is 45.45 percent to total number of 275 sample individuals is some what discouraging which is mainly due to the fact that very limited numbers of F.L.Ds. have been organised. Though the F.L.Ds. can not be organised on large number of farmer's fields but the lack of knowledge about this activity is indicative of the fact that good number of sample population is unaware of the modern technology relating to agriculture that presents a dismal picture. The solution to this problem lies in organisation of more number of F.L.Ds. covering wider number of subjects as well as wider dissemination of the results of F.L.Ds. among large number of cultivators.
- 5.232 Similarly regarding on farm testing the lack of knowledge by 144 individuals [52.36 percent] indicates the level of unawareness about new technology relating to agriculture, the solution to which lies in organisation of more number of O.F.Ts. covering wider spectrum of subjects as well as wider dissemination of the results of O.F.T. among large number of farming community.

### FIELD VISITS OF K.V.K. SCIENTISTS

- 5.233 Regular field visits by the K.V.K. scientists are necessary pre-requisites for implementation of agriculture related technology and also to keep alive the confidence level of the farming community. The table below shows the extent of such visits.

Table No. 5.73  
Field Visits of K.V.K. Scientists

S. No	Name of the Village	No. of Individual	The duration gap			
			One month (1)	Two months (2)	More than two months (3)	Never (4)
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	27	1	0	0	18
2.	Indira Gram (Mahu)	24	0	0	0	24
3.	Gaginda (Mahu)	40	0	1	0	39
	<b>Adopted Village</b>	91	1	1	0	81
4.	Phool Karari (Indore)	28	0	0	0	28
5.	Bari Kalmer (Indore)	30	1	0	24	5
6.	Jag Jeewan Gram (Mahu)	17	0	1	13	3
7.	Nehru Van Gram (Mahu)	19	0	2	17	0
8.	Sendal (Mahu)	40	5	0	34	1
9.	Mendal (Mahu)	50	15	5	12	17
	<b>Cluster Village</b>	184	21	8	100	54
	<b>Total</b>	275	22	9	100	135

- 5.234 Out of total of 275 individuals 266 individuals [96.73 percent] have informed about irregular visits of K.V.K. scientists which seems rather an inflated information, which is contradicted by the fact of cent-percent awareness level of the farmers about services rendered by the K.V.K. The high degree of absence of K.V.K. scientists would have not lead to such type of positive results. May be the individuals might have vented out their regrets caused due to some other factors by informing about irregular visits by K.V.K. scientists. Even if half the information is taken to be correct, the picture remains to be grim. At least a fortnightly visit by K.V.K. scientists is necessary to keep-up the confidence level of the farmers. **The**

authorities of K.V.K., Indore may sort out this issue to avoid such regrets from farming communities for whom they work.

### THE STATUS OF REGULAR CONTACT WITH K.V.K.

5.235 The regular contact of the farms with the K.V.K. is one of the determining factors for implementation of agriculture related technologies in the field. The table below shows the details;

Table No. 5.74  
Status of Regular Contact with K.V.K.

S. No	Name of the Village	No. of Individual	Are you regular touch with KVK		If yes reason			if 'no' the reason	
			Yes (1)	No (2)	for seed (1)	plant protection (2)	New technology (3)	Distance (1)	Do not feel the necessity (2)
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	27	27	0	12	3	12	2	0
2.	Indira Gram (Mahu)	24	24	0	7	3	13	0	0
3.	Gaginda (Mahu)	40	39	1	0	0	40	1	0
	<b>Adopted Village</b>	91	90	1	19	6	65	3	0
4.	Phool Karari (Indore)	28	28	0	0	0	20	0	10
5.	Bari Kalmer (Indore)	30	7	23	0	1	12	9	4
6.	Jag Jeewan Gram (Mahu)	17	11	6	0	0	10	10	0
7.	Nehru Van Gram (Mahu)	19	14	5	1	0	8	8	0
8.	Sendal (Mahu)	40	10	30	0	0	11	28	0
9.	Mendal (Mahu)	50	37	13	9	0	35	6	0
	<b>Cluster Village</b>	184	107	77	10	1	96	61	14
	<b>Total</b>	275	197	78	29	7	161	64	14

5.236 Out of total of 275 individuals, 197 individuals [71.64 percent] are in regular contact with K.V.K. mainly because of the desire for adopting new technology [58.55 percent individuals] and for obtaining quality seed [10.55 percent individuals]. A total number of 78 individuals are not in regular contact with K.V.K. which is 28.36 percent to total individuals. The main reason is the distance factor due to which 64 number of individuals can not keep a regular contact. Fourteen number of individuals have not contacted the K.V.K. as they do not feel the necessity of it. **Though the number of such individuals is limited but the attitude seems disturbing. The K.V.K. Scientists may initiate particular efforts to stop brewing such attitudinal trend which, in long run, may be very harmful.**



## STATUS OF IMPLEMENTATION OF THE SERVICES OF THE K.V.K.

5.237 The table below shows the details;

Table No. 5.75  
Implementation of the Services of K.V.K.

S No	Name of the Village	No. of Individual	Implementati on of the services of K.V.K.		If yes in what fields				
			Yes (1)	No (2)	Agronom y	Hortic ulture	Animal husbandry	Fisheri es	Poultr y
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	27	27	0	27	0	0	0	0
2.	Indira Gram (Mahu)	24	24	0	24	0	0	0	0
3.	Gaginda (Mahu)	40	40	0	40	0	0	0	0
	<b>Adopted Village</b>	91	91	0	91	0	0	0	0
4.	Phool Karari (Indore)	28	28	0	6	2	0	0	0
5.	Bari Kalmer (Indore)	30	28	2	5	5	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	17	0	4	2	0	0	0
7.	Nehru Van Gram (Mahu)	19	19	0	11	2	0	0	0
8.	Sendal (Mahu)	40	39	1	12	2	0	0	0
9.	Mendal (Mahu)	50	48	2	34	0	0	0	0
	<b>Cluster Village</b>	184	179	5	72	13	0	0	0
	<b>Total</b>	275	270	5	163	13	0	0	0

Table No. 5.75 [Contd...]  
Implementation of the Services of K.V.K

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Not satisfied with new technology	Problem of resources	Satisfied with present status
1	2	11	12	13	14	15	16	17	18
1.	Mali Badodia (Indore)	27	0	0	0	0	0	0	0
2.	Indira Gram (Mahu)	24	0	0	0	0	0	0	0
3.	Gaginda (Mahu)	37	0	0	0	0	0	0	0
	<b>Adopted Village</b>	88	0	0	0	0	0	0	0
4.	Phool Karari (Indore)	28	0	0	0	0	0	2	0
5.	Bari Kalmer (Indore)	30	0	0	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	0	0	0	0	0	1	0
7.	Nehru Van Gram (Mahu)	19	0	0	0	0	0	0	0
8.	Sendal (Mahu)	35	0	0	0	0	0	0	0
9.	Mendal (Mahu)	49	0	0	0	0	0	2	0
	<b>Cluster Village</b>	178	0	0	0	0	0	5	0
	<b>Total</b>	266	0	0	0	0	0	5	0

5.238 The above table shows that out of 275 individuals, 270 individuals have implemented the services of K.V.K. which is 98.18 percent to total respondents. **This is an achievement by itself.** It is worth mentioning here that the figures of itemwise coverage will not tally with the figure of 270 as the same person from agronomy might have implemented the improved techniques in the fields of horticulture, animal husbandry, home science etc.

5.239 The subject wise coverage figures show that the highest number of 266 individuals [96.73 percent to total individuals] have implemented the improved techniques relating to home science followed by 163 individuals [59.27 percent] implementing the improved techniques relating agronomy and 13 individuals [4.73 percent] implementing the techniques regarding horticulture crops. **In rest of the subjects like animal husbandry, fishery, poultry, agro-forestry, organic farming, watershed activities and training of rural youth no implementation efforts have been done by the sample individuals as for these activities even vocational trainings have hardly been organised. Intensive efforts are required in the fields like animal husbandry, agro-forestry and watershed activities as these fields have extensive scope for employment and income generation.**

**5.240 Only five individuals from villages like Phool Karari, Jag Jeevan Gram and Mendal [all cluster villages] have not implemented the services of K.V.K., mainly because of the problems of resources.**

### SATISFACTION LEVEL OF THE INDIVIDUALS ABOUT THE SERVICES OF K.V.K.

5.241 The level of satisfaction derived from the services of K.V.K. is important to sustain the efforts of K.V.K. over a period of time. The table below shows the details;

Table No. 5.76  
Satisfaction Level of the Individuals

S. No	Name of the Village	No. of Individual	Satisfied with the impact		If yes in what fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	27	27	0	26	0	0	0	0
2.	Indira Gram (Mahu)	24	24	0	24	0	0	0	0
3.	Gaginda (Mahu)	40	40	0	40	0	0	0	0
	<b>Adopted Village</b>	91	91	0	90	0	0	0	0
4.	Phool Karari (Indore)	28	28	0	5	3	0	0	0
5.	Bari Kalmer (Indore)	30	30	0	6	4	0	0	0
6.	Jag Jeevan Gram (Mahu)	17	17	0	4	2	0	0	0
7.	Nehru Van Gram (Mahu)	19	19	0	11	2	0	0	0
8.	Sendal (Mahu)	40	40	0	15	2	0	0	0
9.	Mendal (Mahu)	50	50	0	27	0	0	0	0
	<b>Cluster Village</b>	184	184	0	68	13	0	0	0
	<b>Total</b>	275	275	0	158	13	0	0	0

Table No. 5.76 [Contd...]  
Satisfaction Level of the Individuals

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Trainin g of rural youth	Techn-ique is difficul t to follow	Inputs are not easily available	Non-availabi lity of advice in the time
1	2	11	12	13	14	15	16	17	18
1.	Mali Badodia (Indore)	27	0	0	0	0	0	0	0
2.	Indira Gram (Mahu)	24	0	0	0	0	0	0	0
3.	Gaginda (Mahu)	36	1	0	0	0	0	0	0
	<b>Adopted Village</b>	87	1	0	0	0	0	0	0
4.	Phool Karari (Indore)	28	0	0	0	0	0	0	0
5.	Bari Kalmer (Indore)	30	0	0	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	0	0	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	19	0	0	0	0	0	0	0
8.	Sendal (Mahu)	35	0	0	0	0	0	0	0
9.	Mendal (Mahu)	50	0	0	0	0	0	0	0
	<b>Cluster Village</b>	179	0	0	0	0	0	0	0
	<b>Total</b>	266	1	0	0	0	0	0	0

5.242 The above table shows the cent-percent level of satisfaction of sample individuals for the services rendered by the K.V.K. which in itself is a startling achievement.

**5.243 Home Science, Agronomy and Horticulture are the subjects for which satisfaction level is substantial. In subjects like animal husbandry, fishery, poultry, organic farming, watershed activities and training of rural youth the satisfaction level is nil because of the basic fact that for these subjects no vocational training has been initiated nor the FLDs or OFTs have been organised. Moreover the cultivators of our sample area are not much interested in these activities as they do not contribute much to their family income. However, efforts must be made to popularize the activities like animal husbandry, agro-forestry and watershed activities, as these subjects are important for rural economy. However only one individual from village Gaginda [adopted village] has expressed satisfaction for agro-forestry which is not of much consequence. Here again subjectwise response will not tally with the figure of 270 as the same individual may have response on other subjects.**

#### IMPACT ON INCOME ENHANCEMENT

5.244 The validity of any effort is ultimately measured by its impact over income enhancement whether directly or indirectly. The table below shows the details;

Table No. 5.77  
Impact on Income Enhancement

S. No.	Name of the Village	No. of Individual	Income enhancement		If yes the fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	27	27	0	26	0	0	0	0
2.	Indira Gram (Mahu)	24	24	0	24	0	0	0	0
3.	Gaginda (Mahu)	40	40	0	36	0	0	0	0
	<b>Adopted Village</b>	91	91	0	86	0	0	0	0
4.	Phool Karari (Indore)	28	28	0	5	3	0	0	0
5.	Bari Kalmer (Indore)	30	30	0	7	3	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	17	0	4	2	0	0	0
7.	Nehru Van Gram (Mahu)	19	19	0	9	2	0	0	0
8.	Sendal (Mahu)	40	40	0	14	2	0	0	0
9.	Mendal (Mahu)	50	50	0	29	0	0	0	0
	<b>Cluster Village</b>	184	184	0	68	12	0	0	0
	<b>Total</b>	275	275	0	154	12	0	0	0

Table No. 5.77 [Contd...]  
Impact on Income Enhancement

S. No.	Name of the Village	If yes the reasons					If no the reasons		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Could not follow the instruction	Problem of resource	Non-availability technical advice in time
1	2	11	12	13	14	15	16	17	18
1.	Mali Badodia (Indore)	26	1	0	0	0	0	0	0
2.	Indira Gram (Mahu)	24	0	0	0	0	0	0	0
3.	Gaginda (Mahu)	37	0	0	0	0	0	0	0
	<b>Adopted Village</b>	87	1	0	0	0	0	0	0
4.	Phool Karari (Indore)	28	0	0	0	0	0	0	0
5.	Bari Kalmer (Indore)	30	0	0	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	0	0	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	19	0	0	0	0	0	0	0
8.	Sendal (Mahu)	35	0	0	0	0	0	0	0
9.	Mendal (Mahu)	50	0	0	0	0	0	0	0
	<b>Cluster Village</b>	179	0	0	0	0	0	0	0
	<b>Total</b>	266	1	0	0	0	0	0	0

5.245 From the above table a cent-percent positive response regarding impact of K.V.K. services over income enhancement is visualized which is creditable to the efforts of the K.V.K. in various fields of its operation.

5.246 As is expected, maximum number of 266 individuals i.e. 96.73 percent to total of 275 individuals have expressed the positive impact on income enhancement through home science activities followed by agronomy [154 individuals] and horticulture [12 individuals] who have found these activities useful for family income enhancement.

## EXTENT OF INCOME ENHANCEMENT

- Assessment of income level of individuals is one of the most difficult aspects of primary data collection as the persons are usually shy of giving the correct information. However, through indirect approach, information regarding income has been collected which is given in the following table;

Table No. 5.78  
Extent of Income Enhancement

S. No	Name of the Village	Percentage increase in Income								
		1 to 10 %	11 to 20%	21 to 30%	31 to 50%	51 to 60%	61 to 70%	71 to 80%	81 to 90%	91 to 100%
1	2	3	4	5	6	7	8	9	10	11
1.	Mali Badodia (Indore)	15	10	2	0	0	0	0	0	0
2.	Indira Gram (Mahu)	12	4	4	4	0	0	0	0	0
3.	Gaginda (Mahu)	16	15	9	0	0	0	0	0	0
	<b>Adopted Village</b>	43	29	15	4	0	0	0	0	0
4.	Phool Karari (Indore)	26	0	0	2	0	0	0	0	0
5.	Bari Kalmer (Indore)	26	4	0	0	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	0	0	0	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	19	0	0	0	0	0	0	0	0
8.	Sendal (Mahu)	25	10	5	0	0	0	0	0	0
9.	Mendal (Mahu)	50	0	0	0	0	0	0	0	0
	<b>Cluster Village</b>	163	14	5	2	0	0	0	0	0
	<b>Total</b>	206	43	20	6	0	0	0	0	0

5.247 The above table shows that out of 275 individuals, 206 individuals [74.91 percent to total individuals] have reported about 1 to 10 percent enhancement in income due to the impact of various services of K.V.K. while 43 individuals [15.64 percent] reported about 11 to 20 percent income enhancement **The income enhancement in the percentage group of 21 to 50 has been reported by 26 persons [9.45 percent] due to impact of various technologies introduced by K.V.K. which, in itself, is a startling achievement.**

## OPINION ABOUT CONTINUANCE OF THE SERVICES OF K.V.K.

- The table below shows the details;

Table No. 5.79  
Opinion about Continuance of K.V.K. Services

S. No.	Name of the Village	No. of Individual	Continuation of the services of K.V.K.	
			Yes	No
1	2	3	4	5
1.	Mali Badodia (Indore)	27	25	2
2.	Indira Gram (Mahu)	24	24	0
3.	Gaginda (Mahu)	40	39	1
	<b>Adopted Village</b>	91	88	3
4.	Phool Karari (Indore)	28	28	0
5.	Bari Kalmer (Indore)	30	29	1
6.	Jag Jeewan Gram (Mahu)	17	17	0
7.	Nehru Van Gram (Mahu)	19	18	1
8.	Sendal (Mahu)	40	38	2
9.	Mendal (Mahu)	50	50	0
	<b>Cluster Village</b>	184	180	4
	<b>Total</b>	275	268	7

5.248 The above table shows that out of 275 individuals, 268 individuals [97.45 percent to total individuals] have reported for continuance of the services by K.V.K. particularly for subjects like home science, agronomy and horticulture. Only 7 number of individuals have given negative opinion which seems natural in the context of large number of respondents. **Viewing things from the positive angle, the performance of the K.V.K. seems laudable, as the efforts have won the confidence of the farming community of our area of study.**

## SUGGESTIONS FOR ADDITIONAL SERVICES TO BE RENDERED BY THE K.V.K.

5.249 Information regarding suggestions for additional services to be rendered by the K.V.K. has been collected from the individuals. The table below shows the details;

Table No. 5.80  
Suggestions for Additional Services to be Rendered by K.V.K.

S. No.	Name of the Village	No. of Individual	Suggestions for additional services by KVK			
			Production of by product of crops	Marketing strategy	Weather forecasting	Availability of agri. inputs at panchayat level
1	2	3	4	5	6	7
1.	Mali Badodia (Indore)	27	9	15	0	2
2.	Indira Gram (Mahu)	24	9	9	0	6
3.	Gaginda (Mahu)	40	28	11	0	1
	<b>Adopted Village</b>	91	46	35	0	9
4.	Phool Karari (Indore)	28	18	0	0	10
5.	Bari Kalmer (Indore)	30	18	8	0	3
6.	Jag Jeewan Gram (Mahu)	17	2	0	0	14
7.	Nehru Van Gram (Mahu)	19	9	2	0	8
8.	Sendal (Mahu)	40	22	13	2	0
9.	Mendal (Mahu)	50	18	0	0	32
	<b>Cluster Village</b>	184	87	23	2	67
	<b>Total</b>	275	133	58	2	76

- 5.250 Out of 301 individuals, 242 individuals [80.40 percent to total individuals] have given their useful suggestions about introduction of additional services to be rendered by the K.V.K. Important among these are regarding suggestions about **production of by-product of crops, development of marketing strategy for fair return of the product and making available agricultural inputs at Gram Panchayat Level** wherein 133, 58 and 76 individuals respectively have given their useful suggestions.
- 5.251 Regarding production of by-product, that may lead to some processing activities, the work may be initiated in liaison with Industries Department of the district.
- 5.252 Marketing of agriculture produce is gaining importance to avoid the exploitation of farmers by brokers. The intervention of K.V.K. personnel will be very useful if some sort of training is organised for beneficiary cultivators in liaison with Mandi Committees.
- 5.253 Regarding availability of agriculture inputs at Gram Panchayat level, the K.V.K Scientists may bring home the solution in consultation with the Chief Executive Officer of Zila Panchayat by developing modalities for making available things at Gram Panchayat level.
- 5.254 It is, therefore, worth considering to incorporate in the mandate of K.V.K. the subjects like production of by-products and development of marketing strategy of the product of the cultivators.**

#### UTILIZATION OF THE ENHANCED INCOME

- 5.255 Proper utilization of enhanced income, is equally important as compared to its generation. The table below shows the utilization of enhanced income of sample individuals for purchase of various agriculture inputs;

Table No. 5.81  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Tractor		Harvester		Thresher	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Mali Badodia (Indore)	27	0	27	0	27	0	27
2.	Indira Gram (Mahu)	24	0	24	0	24	0	24
3.	Gaginda (Mahu)	40	0	40	0	40	0	40
	<b>Adopted Village</b>	91	0	91	0	91	0	91
4.	Phool Karari (Indore)	28	0	28	0	28	0	28
5.	Bari Kalmer (Indore)	30	0	30	0	30	1	29
6.	Jag Jeewan Gram (Mahu)	17	0	17	0	17	0	17
7.	Nehru Van Gram (Mahu)	19	0	19	0	19	0	19
8.	Sendal (Mahu)	40	0	40	0	40	0	40
9.	Mendal (Mahu)	50	0	50	0	50	0	50
	<b>Cluster Village</b>	184	0	184	0	184	1	183
	<b>Total</b>	275	0	275	0	275	1	274

Table No. 5.81 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Plough		Seed drill		Bullock pair	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
			10	11	12	13	14	15
1.	Mali Badodia (Indore)	27	5	22	0	27	3	24
2.	Indira Gram (Mahu)	24	9	15	0	24	2	22
3.	Gaginda (Mahu)	40	16	24	0	40	6	34
	<b>Adopted Village</b>	91	30	61	0	91	11	80
4.	Phool Karari (Indore)	28	0	28	0	28	2	26
5.	Bari Kalmer (Indore)	30	4	26	0	30	1	29
6.	Jag Jeewan Gram (Mahu)	17	0	17	0	17	0	17
7.	Nehru Van Gram (Mahu)	19	0	19	0	19	1	18
8.	Sendal (Mahu)	40	10	30	0	40	1	39
9.	Mendal (Mahu)	50	0	50	0	50	11	39
	<b>Cluster Village</b>	184	14	170	0	184	16	168
	<b>Total</b>	<b>275</b>	<b>44</b>	<b>231</b>	<b>0</b>	<b>275</b>	<b>27</b>	<b>248</b>

Table No. 5.81 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Power/Knapsac sprayer		Handhoe		Storage facility	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
			16	17	18	19	20	21
1.	Mali Badodia (Indore)	27	1	26	7	20	1	26
2.	Indira Gram (Mahu)	24	0	24	4	20	0	24
3.	Gaginda (Mahu)	40	5	35	0	40	0	40
	<b>Adopted Village</b>	91	6	85	11	80	1	90
4.	Phool Karari (Indore)	28	6	22	0	28	0	28
5.	Bari Kalmer (Indore)	30	2	28	0	30	0	30
6.	Jag Jeewan Gram (Mahu)	17	2	15	0	17	0	17
7.	Nehru Van Gram (Mahu)	19	0	19	0	19	0	19
8.	Sendal (Mahu)	40	5	35	4	36	1	39
9.	Mendal (Mahu)	50	8	42	0	50	0	50
	<b>Cluster Village</b>	184	23	161	4	180	1	183
	<b>Total</b>	<b>275</b>	<b>29</b>	<b>246</b>	<b>15</b>	<b>260</b>	<b>2</b>	<b>273</b>



Table No. 5.81 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Tube well /Dug well		Electric/diesel motor	
			Yes (1)	No (2)	Yes (1)	No (2)
			22	23	24	25
1.	Mali Badodia (Indore)	27	0	27	1	26
2.	Indira Gram (Mahu)	24	0	24	0	24
3.	Gaginda (Mahu)	40	0	40	0	40
	<b>Adopted Village</b>	91	0	91	1	90
4.	Phool Karari (Indore)	28	0	28	0	28
5.	Bari Kalmer (Indore)	30	0	30	0	30
6.	Jag Jeewan Gram (Mahu)	17	0	17	0	17
7.	Nehru Van Gram (Mahu)	19	0	19	0	19
8.	Sendal (Mahu)	40	0	40	0	40
9.	Mendal (Mahu)	50	0	50	0	50
	<b>Cluster Village</b>	184	0	184	0	184
	<b>Total</b>	275	0	275	1	274

**5.256** The above table shows that 152 individuals have utilized their enhanced income for purchase of various agriculture inputs which constitutes 50.50 percent to total number of 301 sample individuals. The purchases are mainly limited on items like tractor, harvester, plough, bullock pairs power/knapsac sprayer and hand hoe. The utilization level of enhanced income for purchase of agriculture input is some what encouraging.

#### **IMPACT OF ENHANCED INCOME OVER EDUCATION LEVELS**

**5.257** The table jbelow shows the impact of enhanced income over levels of education in our area of study;

Table No. 5.82

## Impact of Enhanced Income Over Levels of Education

S. No.	Name of the Village	No. of Individual	Impact on education due to enhanced income		If yes in what manner				
			Yes (1)	No (2)	More Male Children go to primary/middle (1)	More Female Children go to primary/middle (2)	More male children attend secondary level education (3)	More female children attend secondary level education (4)	Male Female children go for higher education non (5)
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	27	21	6	7	8	4	0	0
2.	Indira Gram (Mahu)	24	14	10	11	8	1	0	0
3.	Gaginda (Mahu)	40	33	7	18	8	7	0	0
	<b>Adopted Village</b>	91	68	23	36	24	12	0	0
4.	Phool Karari (Indore)	28	24	4	16	4	2	2	0
5.	Bari Kalmer (Indore)	30	26	4	15	9	2	0	0
6.	Jag Jeewan Gram (Mahu)	17	9	8	7	0	0	0	1
7.	Nehru Van Gram(Mahu)	19	16	3	10	0	7	0	0
8.	Sendal (Mahu)	40	36	4	24	6	3	1	0
9.	Mendal (Mahu)	50	32	18	26	2	2	0	0
	<b>Cluster Village</b>	184	143	41	98	21	16	3	1
	<b>Total</b>	275	211	64	134	45	28	3	1

Table No. 5.82 [Contd...]  
Impact of Enhanced Income Over Levels of Education

S. No	Name of the Village	No. of Individual	If no the reasons						
			Educa- tion is no priorit y (1)	Purcha se of agr. inputs (2)	Exp. on religio us/soci al rituals (3)	Purchase of luxutry items like TV fridge two wheeler etc. (4)	Consump - tion of intoxicant s (5)	Depos i- ted in the bank (6)	Debt repa y- ment (7)
1	2	3	11	12		13	14	15	16
1.	Mali Badodia (Indore)	27	7	0	0	0	0	0	0
2.	Indira Gram (Mahu)	24	3	7	0	0	0	0	0
3.	Gaginda (Mahu)	40	6	0	0	0	1	0	0
	<b>Adopted Village</b>	91	16	7	0	0	1	0	0
4.	Phool Karari (Indore)	28	4	0	0	0	0	0	0
5.	Bari Kalmer (Indore)	30	4	0	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	2	5	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	19	0	2	0	0	0	0	0
8.	Sendal (Mahu)	40	4	0	0	0	0	0	0
9.	Mendal (Mahu)	50	7	12	0	0	0	0	0
	<b>Cluster Village</b>	184	21	19	0	0	0	0	0
	<b>Total</b>	275	37	26	0	0	1	0	0

5.258 Out of 301 individuals, 278 individuals [92.36 percent] have reported positive impact of enhanced income over levels of education while 23 number of individuals [7.64 percent] have refused about such impact. The positive impact is predominant in case of primary and middle level education for both boys and girls wherein 245 individuals [81.40 percent to total individuals] have reported that due to enhanced income more number of boys and girls are being sent to attend elementary level [primary + middle] of education. The positive impact of enhanced income on levels of education shows the awareness of the sample individuals about value of education.

5.259 Regarding negative responses by 23 individuals, 4 individuals [1.33 percent to total of 301 individuals] have reported that education is no priority to them while 18 individuals [5.98 percent to total individuals] have given the reason of spending the portions of enhanced income over purchase of agriculture inputs. However all these reasons may be overcome by the extension efforts of K.V.K. personnel by convincing the villagers about value of education while they impart vocational training.

### IMPACT OF ENHANCED INCOME OVER HEALTH STATUS

5.260 Health is again an important social factor that accounts for efficiency in pursuance of any occupation. The table below shows the impact of enhanced income over health status of sample population.

Table No. 5.83

## Impact of Enhanced Income over Health Conditions

S. No.	Name of the Village	No. of Individual	Impact on Health		If yes in what manner				
			Yes (1)	No (2)	Services of medical personnel (1)	Vaccination of children / women done (2)	Child nutrition (3)	Female nutrition during gestation (4)	Adoption of Family welfare measures
1	2	3	4	5	6	7	8	9	10
1.	Mali Badodia (Indore)	27	23	4	2	15	4	0	2
2.	Indira Gram (Mahu)	24	23	1	14	9	0	0	0
3.	Gaginda (Mahu)	40	38	2	26	6	5	0	1
	<b>Adopted Village</b>	91	84	7	42	30	9	0	3
4.	Phool Karari (Indore)	28	28	0	25	0	3	0	0
5.	Bari Kalmer (Indore)	30	29	1	9	17	2	0	0
6.	Jag Jeewan Gram (Mahu)	17	17	0	16	0	1	0	0
7.	Nehru Van Gram (Mahu)	19	19	0	19	0	0	0	0
8.	Sendal (Mahu)	40	37	3	23	12	2	0	0
9.	Mendal (Mahu)	50	49	1	50	0	0	0	0
	<b>Cluster Village</b>	184	179	5	142	29	8	0	0
	<b>Total</b>	275	263	12	184	59	17	0	3

Table No. 5.83 [Contd...]

## Impact of Enhanced Income over Health Conditions

S. No	Name of the Village	No. of Individual	If no the reasons						
			Health is no priority	Believe in local healing methods	Purchase of agri. inputs	Exp. on religious functions	Luxury items TV Fridge, Two wheeler, Four wheeler	Consumption of intoxicants	Deposited in bank
1	2	3	11	12	13	14	15	16	17
1.	Mali Badodia (Indore)	27	3	0	0	0	0	0	0
2.	Indira Gram (Mahu)	24	1	0	0	3	0	0	0
3.	Gaginda (Mahu)	40	2	0	0	0	0	0	0
	<b>Adopted Village</b>	91	6	0	0	3	0	0	0
4.	Phool Karari (Indore)	28	0	0	0	0	0	0	0
5.	Bari Kalmer (Indore)	30	0	0	0	2	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	0	0	0	0	0	0	0
7.	Nehru Van Gram (Mahu)	19	0	0	0	0	0	0	0
8.	Sendal (Mahu)	40	1	0	0	0	0	0	0
9.	Mendal (Mahu)	50	0	0	0	0	0	0	0
	<b>Cluster Village</b>	184	1	0	0	2	0	0	0
	<b>Total</b>	275	7	0	0	5	0	0	0

5.261 The above table shows that out of 301 individuals, 289 individuals [96.01 percent to total of 301 individuals] have reported about positive impact of enhanced income over health status which shows the awareness of the sample population about value of keeping good health. The items of positive responses like hiring of the services of medical personnel [224 individuals], vaccination of children/women [45 individuals]. Child nutrition [12 individuals] and adoption of family welfare measures [4 individuals] are indicative of healthy trend since the individuals are more concerned particularly about, the health status of women and children.

**5.262 Though the number of individuals with negative response is only 12 [3.99 percent to total of 301 individuals] but the opinion like health is no priority by 3 number of individuals is a sort of red alert to K.V.K. scientists who must uproot such attitude lest they go deep into the thinking of more individuals.**

### IMPACT OF ENHANCED INCOME OVER POTABLE DRINKING WATER SUPPLY

5.263 The table below shows the details;

Table No. 5.84  
Impact of Enhanced Income over Potable Drinking Water Supply

S. No	Name of the Village	No. of Individual	Improve in potable drinking water		If yes in what way		
			Yes	No	Piped water supply	Hand pump	Aqua guard
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)	27	4	23	1	1	1
2.	Indira Gram (Mahu)	24	0	24	0	0	0
3.	Gaginda (Mahu)	40	10	30	0	11	0
	<b>Adopted Village</b>	91	14	77	1	12	1
4.	Phool Karari (Indore)	28	5	23	2	1	0
5.	Bari Kalmer (Indore)	30	4	26	2	6	0
6.	Jag Jeewan Gram (Mahu)	17	0	17	0	0	1
7.	Nehru Van Gram (Mahu)	19	0	19	0	0	0
8.	Sendal (Mahu)	40	5	35	0	3	0
9.	Mendal (Mahu)	50	4	46	0	3	0
	<b>Cluster Village</b>	184	18	166	4	13	1
	<b>Total</b>	275	32	243	5	25	2

Table No. 5.84 [Contd...]  
Impact of Enhanced Income over Potable Drinking Water Supply

S. No.	Name of the Village	No. of Individual	If No the reasons					
			Drinking water is no priority	Purchase of agri. inputs	Exp. on religious social -rituals	Luxury items TV Fridge, Two wheeler, Four wheeler	Consumption of intoxicants	Deposited in bank
1	2	3	9	10	11	12	13	14
1.	Mali Badodia (Indore)	27	23	1	0	0	0	0
2.	Indira Gram (Mahu)	24	24	0	0	0	0	0
3.	Gaginda (Mahu)	40	25	0	0	0	0	0
	<b>Adopted Village</b>	91	72	1	0	0	0	0
4.	Phool Karari (Indore)	28	16	0	0	0	0	10
5.	Bari Kalmer (Indore)	30	21	0	0	0	0	0
6.	Jag Jeewan Gram (Mahu)	17	11	5	0	0	0	1
7.	Nehru Van Gram (Mahu)	19	17	2	0	0	0	0
8.	Sendal (Mahu)	40	32	1	0	0	0	0
9.	Mendal (Mahu)	50	41	4	1	0	0	8
	<b>Cluster Village</b>	184	138	12	1	0	0	19
	<b>Total</b>	275	210	13	1	0	0	19

5.264 The above table shows a reverse situation where the negative response is to the tune of 182 individuals which is 60.47 percent to total of 301 individuals while the positive response is by only 119 individuals [39.53 percent]. These facts show that availability of potable drinking water is no priority in rural areas which is again proved by the information that 210 individuals [76.36 percent to total of 275 individuals] have informed that drinking water supply is no priority for them as against the basic priority of earning sufficient income. The majority of positive respondents have indicated the spending of portion of enhanced income over installation of hand pumps. **The solution to this problem of neglect of potable drinking water lies in enhancement of agricultural income of the rural population which if achieved will solve the problem of drinking water and also sanitation as the enhanced income induces the individuals to take care of the finer details of life.**

#### IMPACT OF ENHANCED INCOME OVER HOUSING CONDITIONS

5.265 The table below shows the details;

Table No. 5.85  
Impact of Enhanced Income over Housing Conditions

S. No	Name of the Village	No. of Individual	Enhancement in income resulted in improved housing contentions		If yes in what way		
			Yes	No	Semi pucca house constructed	Pucca house constructed	Separate cattle shed constructed
1	2	3	4	5	6	7	8
1.	Mali Badodia (Indore)	27	9	18	5	2	0
2.	Indira Gram (Mahu)	24	0	24	0	0	0
3.	Gaginda (Mahu)	40	16	24	14	0	7
	<b>Adopted Village</b>	91	25	66	19	2	7
4.	Phool Karari (Indore)	28	20	8	9	0	11
5.	Bari Kalmer (Indore)	30	16	14	11	3	0
6.	Jag Jeewan Gram (Mahu)	17	6	11	5	0	0
7.	Nehru Van Gram (Mahu)	19	9	10	8	0	1
8.	Sendal (Mahu)	40	18	22	10	7	0
9.	Mendal (Mahu)	50	25	25	19	0	7
	<b>Cluster Village</b>	184	94	90	62	10	19
	<b>Total</b>	275	119	156	81	12	26

Table No. 5.85 [Contd...]  
Impact of Enhanced Income over Housing Conditions

S. No.	Name of the Village	No. of Individual	If No the reasons					
			Better housing no priority	Purchase of agr. inputs	Exp. on religious / social rituals	Luxury items TV, Fridge, Two wheeler, Four wheeler	Consumption of intoxicants	Deposited in bank
1	2	3	9	10	11	12	13	14
1.	Mali Badodia (Indore)	27	11	0	0	2	0	3
2.	Indira Gram (Mahu)	24	2	0	0	0	4	8
3.	Gaginda (Mahu)	40	9	20	0	3	0	9
	<b>Adopted Village</b>	91	22	20	0	5	4	20
4.	Phool Karari (Indore)	28	0	10	0	2	0	0
5.	Bari Kalmer (Indore)	30	7	0	0	1	0	3
6.	Jag Jeewan Gram (Mahu)	17	1	13	0	0	0	0
7.	Nehru Van Gram (Mahu)	19	0	5	0	0	0	0
8.	Sendal (Mahu)	40	20	2	0	0	0	0
9.	Mendal (Mahu)	50	0	15	1	0	3	2
	<b>Cluster Village</b>	184	28	45	1	3	3	5
	<b>Total</b>	275	50	65	1	8	7	25

5.266 The above table shows that out of 301 individuals, 122 individuals [40.53 percent] have positive responses while 179 individuals [59.47 percent] have refused spending of any amount of enhanced income over improving the housing conditions. The status seems obvious as frequent expenditure over improving the housing condition is not usually done. The enhanced income has generally been utilized for construction of semi pucca houses and separate cattle-shed. For negative respondents the important reasons are lack of priority in matters of better housing conditions [50 individuals] and purchase of agriculture inputs [65 individuals]. However the purchase of agriculture inputs being a matter of higher priority against improving the housing conditions seems justified but better housing being no priority is an attitudinal drawback which at times deters the effort even with availability of resources. This sort of thinking can easily be rectified by the K.V.K. Scientists during their field visits by emphasizing upon the importance of better living conditions from various health point of views.

#### **AWARENESS ABOUT WELFARE SCHEMES INITIATED BY THE STATE GOVERNMENT WITH ASSISTANCE FROM GOVERNMENT OF INDIA**

5.267 The basic objectives of various welfare schemes initiated by the government are for providing employment opportunities to the target group for augmentation of income thereby improving the quality of life of the individuals/community. Though this information has no direct relevance to the functioning of K.V.K. but its personnel are supposed to popularize such schemes among villagers for taking financial support from such programmes. In the following paragraphs the details of a few important schemes have been given which have direct impact over the livelihoods of sample population.

#### **JAWAHAR GRAM SAMRIDHI YOJANA**

5.268 The former scheme of Jawahar Rojgar Yojna renamed as Jawahar Gram Samridhi Yojna was started from the year 1999-2000 with the basic objective of creating community assets of permanent nature, thereby providing employment to local labour. The survey results show that out of 301 individuals 233 individuals [77.41 percent] are aware of the scheme while rest of 68 individuals [22.59 percent] have no knowledge about the scheme. The scheme is important from the view point of creating community asset that results in availability of employment opportunities. Awareness about this scheme will induce the villagers to assert their demand through Gram Panchayat to develop their area. The K.V.K. personnel may, during their field visits, publicize the utility of the scheme among the villagers.

#### **EMPLOYMENT ASSURANCE SCHEME**

5.269 Started from the year 1997-98, the scheme aims at providing employment to rural population during lean season of agriculture thereby creating community assets. **The response to this scheme is somewhat encouraging as 190 individuals [63.12 percent] are aware about the scheme.**

#### **ESTABLISHMENT OF HAND LOOM UNITS**

5.270 Under this scheme, the units having 5 to 10 looms are registered and loom-shed subsidy and margin money subsidy are given. **Only 3 persons of our sample area are aware of the scheme. When even awareness is not there, there can hardly be any possibility of its implementation in our area of study.**



## ESTABLISHMENT OF SERICULTURE UNITS

- 5.271 Under this scheme the beneficiaries are given training on various aspects of sericulture activities to supplement their income. For this purpose Resham Kendras spread over in districts assume nodal responsibilities to train the beneficiaries and augment their infrastructure. **Only 2 individuals from our area of study are aware of the existence of such scheme when the scheme is so important for rural economy. The K.V.K. personnel in liaison with concerned district authorities may take-up a campaign for making villagers aware about the benefits of the scheme.**

## ESTABLISHMENT OF FAMILY BASED RURAL INDUSTRIAL UNITS

- 5.272 The scheme is implemented by the Madhya Pradesh Khadi and Gramodayog Board. Under this scheme the units pertaining to SC, ST and OBCs are given 90 percent subsidy on capital loan and remaining 10 percent loan is given by the banks. The level of awareness about this scheme is reasonably fair as 18 individuals [5.98 percent to total of 301 individuals] are aware about this scheme.

## MID DAY MEALS

- 5.273 The programme has proved to be an effective incentive for retention of school going children relating to primary education, specially the children coming from low income group. Under this programme cooked meals are provided to the school going children. **The level of awareness of this scheme, as 242 individuals, which is 88.00 percent to total of 275 individuals are aware about this scheme.**

## FREE SUPPLY OF TEXT BOOKS

- 5.274 Under this scheme all the students of primary standard [classes 1<sup>st</sup> to 5<sup>th</sup>] belonging to SC, ST and OBCs and students of classes 1<sup>st</sup> to 3<sup>rd</sup> standards belonging to general communities are given text books free of cost. As per our survey results 234 individuals [77.74 percent] are aware about the scheme while 67 individuals [22.26 percent] are not aware of the scheme. **Since the supply of text books free of cost is mandatory, the individuals unaware of the scheme are either persons having their wards above primary standards of education or the rate of drop-out is so high that they are not particular about the scheme. However, efforts both by persons of school education department and K.V.K. may reduce such extent of unawareness.**

## WOMEN SELF HELP GROUP

- 5.275 With view to ensure social and economic empowerment of women, self help groups [S.H.Gs.] are formed for making the women confident to face challenges on all fronts, be it social or economic. In this scheme, the members of the group deposit a part of their saving in the fund raised by the group and may take loan to meet their various social and economic obligations, subject to return of the amount with interest. In our area of study 291 individuals [96.68 percent] are aware of this scheme which, ofcourse, is very encouraging that indicates the awareness of individuals about the value of such institution. Unawareness aspect for 10 individuals may easily overcome by little more extension efforts by concerned government officials and persons of K.V.K.

## GRAMYA YOJNA

5.276 Under this scheme the poor women are given interest free loan upto Rs. 500.00 towards starting a small business. After repayment of the first loan within one year, second loan to the tune of Rs. 1500.00 is given. In our area of study, 215 numbers of individuals [71.43 percent] are aware of this scheme, **which is quit satisfactory.**

## AUSMATI YOJNA

5.277 With the objective of providing better medical assistance to the women belonging to the families living below the poverty line in rural areas, this scheme was started in the year 1999. **For this scheme also the extent of awareness by 246 individuals [81.73 percent] is satisfactory.**

5.278 In what follows an attempt has been made to summarise the details of individual particulars of adopted and cluster villages.

- The frame of the present part of the narration is 310 individuals which is 25 percent of the family members of 25 percent sample households belonging to adopted and cluster villages.
- The criteria for selection of individuals are – the persons should be the adult member of the family, he/she should be associated with any programme of the K.V.K., he/she should be literate – may be without having any formal education.
- The majority of 231 individuals are from OBC community that accounts for 76.74 percent to total of 301 individuals from adopted and cluster villages.
- The cent-percent sample individuals from our area of study are the followers of Hindu religion.
- The cent-percent awareness of the individuals about the K.V.K. in terms of its location and more importantly the services rendered by it is an important achievement of the K.V.K.
- The cent percent awareness about vocational training is encouraging.
- Regarding regular contact with K.V.K. the survey results show the regular contact of 78.41 percent individuals mainly because of the desire for adopting new technology and for obtaining quality seed. The positive impact of the efforts of the K.V.K. is clearly visible.
- Out of 301 individuals, 241 individuals have implemented the services of K.V.K. which is 80.07 percent to total respondents which in itself is an achievement of K.V.K's. efforts.
- In the field of agronomy maximum number of 235 individuals [78.07 percent to total of 301 individuals] have implemented the improved technique, followed by 25 individuals [8.31 percent] for organic farming and 4 individuals implementing the techniques regarding agro-forestry.
- Regarding subjects like animal husbandry, fishery, poultry and training of rural youth not much implementation efforts have been made by sample individuals as for these activities even the vocational trainings have hardly been organised. Intensive efforts are required in the fields of animal husbandry, agro-forestry and watershed activities as these areas are important for rural economy.
- Agronomy and horticulture are the subjects for which the satisfaction level is substantial. In subjects like animal husbandry, fishery, poultry and training of rural youth the satisfaction level is negligible because of the basic fact that for these subjects no vocational training in tangible way has been imparted nor the FLDs or OFTs have been organised. Efforts must be made to popularize the

activities like animal husbandry, agro-forestry and watershed activities as these fields have immense promise of employment generation followed by income augmentation in rural areas.

- About 99 percent positive response regarding impact of K.V.K. services over income enhancement has been reported which is of credit to the efforts of K.V.K. in various fields of its operation.
- The extent of income enhancement in the percentage group of 1 to 10 has been reported by 277 persons [92.03 percent] due to impact of various technologies introduced by K.V.K. which, in itself, is a startling achievement.
- Out of 301 individuals, 296 individuals [98.34 percent to total individuals] have reported for the continuance of the services of K.V.K. particularly for subjects like agronomy and horticulture which again shows the positive impact of the services rendered by K.V.K.
- Regarding suggestions for additional services to be rendered by K.V.K. the sample individuals have given useful suggestions regarding introduction of production of by-products of crops and development of marketing strategy for fair return of the product for incorporation in the training mandates of K.V.K.
- As regards utilization of enhanced income, 152 individuals [50.50 percent] have informed about purchase of various agriculture inputs out of their income enhancement.
- Out of 301 individuals, 278 individuals [92.36 percent] have reported positive impact of income enhancement over levels of education particularly over the levels of primary education for both boys and girls that shows the awareness of sample individuals about value of educating their wards.
- Out of 301 individuals, 289 individuals [96.01 percent to total of 301 individuals] have reported about positive impact of enhanced income over health status resulting in hiring of the services of medical personnel, vaccination of children/women, better application of child nutrition and adoption of family welfare measures.
- A reverse situation is visualized in case of potable drinking water supply where the negative response is to the tune of 182 individuals [60.47 percent] which shows that the availability of potable drinking water is no priority in rural areas in general and in our area of study in particular against the basic problem of enhancing agriculture income.
- Regarding impact of enhanced income over improving housing conditions, 122 individuals [40.53 percent] have positive response while 179 individuals [59.47 percent] have refused spending any amount of enhanced income over improving the housing conditions. The situation seems obvious as frequent expenditure over improving housing conditions is not done.
- Regarding awareness about various welfare schemes initiated by the State Government with assistance from Government of India, it has been observed that in case of schemes like Jawahar Gram Samridhi Yojna, Employment Assurance Scheme, Mid-Day Meals, Free Supply of Text Books, Women Self Help Group, Gramya and Ausmati Yojna the level of awareness is encouraging while in respect of schemes like Establishment of Hand Loom Units, Establishment of Sericulture Units and Establishment of Family Based Rural Industrial Units the level of awareness is poor.

## **RESULTS OF SURVEY-INDIVIDUAL PARTICULARS-CONTROL VILLAGE**

- 5.279 In the following paragraphs an attempt has been made to record the reactions of 25 percent of individuals taken from control village of Pipariya Birsa where there is no intervention of KVK. The Total number of family members of the 25 percent of the households in village Pipariya Birsa is 71, the twenty five percent of which is 18 individuals. Therefore, the reactions of 18 number of individuals have been recorded to have a comparison with the

reactions of individuals of adopted and cluster villages having direct intervention of KVK. The criteria for selection of individuals for control village are similar to that for adopted and cluster villages.

- 5.280 Like adopted and cluster villages, 10 individuals out of 18 individuals [55.56 percent] are from O.B.C. community, only 3 individual are from S.T. community and 5 individuals are from general community. Non of the persons are from S.C. community Cent-percent individuals are followers of Hindu religion.
- 5.281 Regarding awareness about the **existence of KVK**, 6 individuals of **control village are aware of the its existence against the cent-percent awareness about K.V.K. in-terms of its location and services rendered by it by the individuals of adopted and cluster villages which seems obvious as in such cases the interventiojn of K.V.K. is direct.** Regarding awareness about he services of K.V.K. the response in the control village is negetive. Awareness is the basic paramter that leads to positive impact of any activity over a long period of time. **The ultimate aim of any K.V.K. is to cover the entire district in terms of implementation of prevailing and new technology relating to agriculture and its allied activities that presupposes awareness about this organisation by the farming community of the district. For this purpose the K.V.K. personnel of district Chhindwara may organize meetings at Gram Panchayat level at least twice in a year inviting one representative from villages where there is no intervention of K.V.K. to make them aware about the utility of services rendered by the K.V.K.**
- 5.282 **Regarding satisfaction derived from per hectare yield of agronomical and horticulture crops, the 17 individuals of control village [94.44 percent] have expressed their dissatisfaction while for adopted and cluster villages this satisfaction level is substantial. However for improving the per-hectare yield, 13 number of individuals from control village which is 72.22 percent to total of 18 individuals have suggested for organizing training for water conservation methods, followed by 4 individuals [22.22 percent] for organizing training about application of inputs.**
- 5.283 Regarding satisfaction level of livestock and dairy activities cent percent individuals have expressed their dissatisfaction **The suggestions forwarded** are making available the improved breed production facilities by 12 individuals [66.67 percent] followed by artificial insemination by 5 individuals [2.78 percent] and one individual [5.56 percent] has opined for making available the improved feed facilities. **It will be worth mentioning that even in cases of adopted and cluster villages the satisfaction level for livestock and poultry activities is negligible.**
- 5.284 As for poultry development the level of dissatisfaction is again cent-percent. **The important suggestions** forwarded are arrangement of improved breeding facilities by 9 individuals [50.00 percent] and providing broiler production facilities by 9 individuals [50.00 percent]. **In case of adopted and cluster villages also the satisfaction level for this activity is negligible.**
- 5.285 Regarding fishery development, again the level of dissatisfaction is cent-percent **supported by the suggestions** like supply of improved feed by 12 individuals [66.67 percent] followed by arranging training about use of improved implements by 6 individuals [33.33 percent] **It is worth mentioning** again that for adopted and cluster villages the level of satisfaction for this activity is nil.

5.286 Important information has been collected about adoption of home science activities for augmentation of family income. **Toy making** is one such activity where 5 individuals [27.78 percent] have asked for training facility followed by **pickle preparation** by 5 individuals [27.78 percent]. **Training regarding baking activities** have also been supported by 5 individuals, papad/jam/jelly making by 5 individuals. **It is again worth** mentioning that in case of adopted and cluster villages the positive response in favour of home science activities is substantial.

- Regarding training of rural youth for self employment, 12 individuals out of total of 18 sample individuals [66.64 percent] have **suggested** for organizing training programme for **motor binding** which is very relevant for performing agricultural activities followed by 12 individuals in favour of training courses for repair of **diesel engine** that accounts for 66.67 percent to total of 18 sample individuals. For activities like **black smithy, carpentry, masonry, tailoring and cycle/scooter repairs** individuals to the tune of 12 individuals each have suggested for organizing training courses. It will not be out of place to mention here that in case of adopted and cluster villages, no individual has shown any inclination for such activities regarding training of rural youth

5.287 Regarding educational status of the sample individuals of control village, the survey results show that out of 18 individuals, 9 persons [50.00 percent] have reported positively about their male children attending the **elementary level of education** [primary + middle i.e. classes 1<sup>st</sup> to 8<sup>th</sup> standards] while the response from 19 individuals [50.0 percent] for this item are negative. More or less similar is the situation with girls wherein 7 number of individuals [38.89 percent] have given positive response while 11 number of individuals [61.11 percent] were negative in their responses. Similarly regarding boys students of **secondary level of education**, i.e. from from classes 9<sup>th</sup> to 12<sup>th</sup> standards only 4 individuals [22.22 percent] have informed that their wards attend the school. In case of **higher education** for both male and female children the positive responses is by 2 individuals only. **In case of adopted and cluster villages 92.36 percent individuals have reported about their male and female wards attending the elementary level of education against the average percentage figure of 50.00 for control village that shows better awareness among the sample inhabitants of adopted and cluster villages about value of elementary education.**

5.288 Regarding health status the following table presents a comparative picture between adopted and cluster villages on one side and the control village on the other;

Table No. 5.86

Comparative Status of Health Facilities Among Sample Individuals

Sl. No.	Item	Status of control village – percentage to total 21 sample individuals	Status of adopted and cluster villages percentage to 275 sample individuals
1	Hiring of services of medical personnel	72.22	74.42
2	Vaccination of children/ pregnant mother	77.78	31.56
3	Child nutrition	55.56	3.99
4	Female nutrition during gestation period	44.44	1.33
5	Adoption of family welfare measures	55.56	1.33

**Note – Only positive responses have been taken into account.**

- 5.289 The above table shows that except for the item of hiring of services of medical personal where the positive response of individuals from adopted and cluster villages is higher than control village, **in rest of the health parameters the percentage positive responses of the individuals of control village are much higher than that of adopted and cluster villages that shows the relatively higher level of awareness among the sample individuals of control village regarding various health parameters.**
- 5.290 Regarding status of drinking water facilities, cent percent individuals have responded positively about availability of hand pumps as main source of drinking water. Piped water supply is not in existence in the sample village which seems obvious as in villages in general this facility is seldom available. **In case of adopted and cluster villages also the majority of respondents have informed about hand pumps as main source of drinking water in their villages.**
- 5.291 Regarding housing facilities, 8 number of individuals [44.44 percent] have reported for construction of semi-pucca houses while 5 individual [27.78 percent] have positive response for construction of pucca house.
- 5.292 The table below shows the comparative level of awareness about the various welfare schemes between adopted/cluster villages and control village;

Table No. 5.87  
Comparative Levels of Awareness

Sl. No.	Name of the Scheme	Level of awareness in percentage for adopted/cluster villages [percent to total of 275 individuals]	Level of awareness in percentage for control village [percent to total of 21 individuals]
1	Jawahar Gram Samridhi Yojna	77.41	22.22
2	Employment Assurance Scheme	63.21	55.56
3	Establishment of Hand Loom Units	1.00	-
4	Establishment of Sericulture Units	0.66	-
5	Establishment of family based rural industrial Units	5.98	-
6	Mid-day Meals	100.00	16.67
7	Free supply of Text Books	77.74	5.56
8	Women Self Help Group	96.68	33.33
9	Gramya Yojna	71.43	-
10	Ausmati Yojna	81.73	44.44

**5.293** The above table shows that the level of awareness about welfare schemes is much higher in adopted/cluster villages as compared to control village. Regarding schemes like Establishment of Hand Loom Units, Establishment of Sericulture Units and Establishment of family based rural industrial Units the level of awareness among individuals of control village is nil while that for adopted and cluster villages the level of awareness is marginal. The validity of such schemes therefore is doubtful as since the awareness about these schemes are missing, the plight of their implementation may well be imagined.

**5.294** In what follows an attempt has been made to summarise the findings of individual particulars of the control village;

- The majority of individuals i.e. 55.56 percent to total of 18 sample individuals are from O.B.C. community. Cent percent individuals are followers of Hindu religion.
- The cent-percent level of unawareness among sample individuals of control village about the services rendered by the K.V.K. is a matter of concern which shows that a portion of population is unaware about prevailing and new technology relating to agriculture and allied services. Since the ultimate objective of any K.V.K. is to cover the farming communities of entire district, it will, therefore, be worthwhile if the K.V.K. Scientists organize meetings at Gram Panchayat level – twice in a year, inviting representative cultivators from control village and apprise them with latest technology or suggest them to be in regular contact with the cultivators of adopted and cluster villages who are already implementing technologies both prevailing and new relating to agriculture and allied activities.
- Regarding satisfaction level of per hectare yield of agronomical and horticultural crops, the 17 individuals of control village have expressed their dissatisfaction with suggestions to organize training activities on water conservation methods and application of agriculture inputs.
- Regarding satisfaction level derived from present status of livestock and dairy activities cent percent individuals have expressed their dissatisfaction. The suggestions forwarded are making available the improved breed production facilities, artificial insemination facilities etc.

- As for poultry development the level of dissatisfaction is again cent-percent. The important suggestions forwarded are arrangement of improved breeding facilities and providing broiler production facilities.
- Similarly for fishery development the level of dissatisfaction is cent-percent supported by the suggestions like supply of improved feed and arranging training about use of improved implements.
- For augmentation of income levels, 27.78 percent individuals are in favour of toy making activities followed by pickle preparation by 27.78 percent individuals, backing activities by 27.78 percent individuals and preparation of papad/jam/jelly by 27.78 percent individuals.
- Regarding training of rural youth for self employment, considerable interests hve been shown by the sample individuals of control village pertaining to activities like motor binding, repair of diesel engine, black smithy, carpentry, msonary, tailoring and cycle/scooter repair etc.
- Regarding elementary level of education [classes 1<sup>st</sup> to 8<sup>th</sup> standards] 50.00 percent individuals have reported that their male wards attend the school where as for female wards 38.89 percent individuals have reported in favour of their school attendance.
- A very satisfactory level of health scenario is existing in control villge wherein for most of the basic health parameters the percentage positive response is much higher than the responses from adopted and cluster villages.
- Hand pumps are the main source of drinking water in our control village where cent percent individuals have reported for its existence.
- Regading housing facilities the individuals of control village have shown interest in constructing semi-pucca houses.
- The level of awareness about various welfare schemes initiated by the government is much higher in case of adopted/cluster villages as compared to control village.



# **Chapter Six**

## **KRISHI VIGYAN KENDRA - CHHINDWARA**

### **The Premise**

- 6.1 The present chapter has been categorized into;
- General Particulars of the district
  - Details of Krishi Vigyan Kendra based on secondary information
  - Results of the survey

### **GENERAL PARTICULARS OF THE DISTRICT**

- 6.2 District Chhindwara is located in between 21.28<sup>0</sup> to 22.49<sup>0</sup> north latitude to 78.10<sup>0</sup> to 79.24<sup>0</sup> east longitude and 1164 meter above sea level. The district is situated in the Southern part of the State of Madhya Pradesh with total geographical area of 11815 squ.km constituting 3.83 percent of the total 308245 squ.km. area of the State.
- 6.3 The district is bordering the State of Maharashtra imbibing the culture of that State. The area is largest orange producing district of the State of Madhya Pradesh with extensive export potentiality.
- 6.4 The district has 1903 inhabited villages with 808 Gram Panchayats delegated with various powers of administration in view of 73<sup>rd</sup> constitutional amendment. The district has 11 number of Development Blocks that vouches for the expanse of rural area with 22 number of police stations for administration of law and order. The population, in general is law abiding since in worst of the nation wide turmoil, nothing untoward happened in the district.
- 6.5 The average annual rainfall of the district is 940.50 mm mainly spread over between June to September. The average maximum temperature during summer is 39.70 celsius while average minimum temperature during winter is 14.90 celsius.
- 6.6 The total population of the district as per census 2001 is 1849283 which is 3.06 percent to total population of the State. Of the total population of the district the total rural population is 1397080 which is 75.55 percent to total population of the district while the urban population is 452203 constituting 24.45 percent total district population. The fact shows the rural character of the district. The percentage of scheduled caste population to total population as per census 2001 is 24.72 while that for scheduled tribe population is 3.11 as against the State level percentage figures of 15.17 and 20.27 respectively. The percentage of total workers to total population of the district as per census 1991 is 43.43 as against the State average figure of 42.74 percent as per census 2001. The total number of persons engaged in agriculture in district Chhindwara as per census 1991 is 445711 which is 65.42 percent to total workers as against the State level percentage figure of 71.49 [as per census 2001].
- 6.7 The following indicators relating to agriculture will show the extent of agriculture related activities in district Chhindwara.

Table No. 6.1  
Important Indicators Relating to Agriculture

Sl. No.	Indicators	District Chhindwara	State of Madhya Pradesh
1	2	3	4
1	Percentage of forest area to total geographical area [ha]	40.42	26.65
2	Net cropped area as percent to total geographical area [ha]	41.94	49.02
3	Per-capita net cropped area [ha]	0.26	0.25
4	Per-capita gross cropped area [ha]	0.32	0.34
5	Percentage of double cropped area to net cropped area [ha]	25.15	35.49
6	Net area irrigated as percent to net cropped area [ha]	26.76	37.56
7	Gross area irrigated as percent to gross cropped area [ha]	22.51	28.54
8	Per-capita production of food-grains [Kg.]	317	266
9	Per hectare use of fertilizer [Kg.]	30.37	46.21
10	Gross value of agriculture produce-per hect. [Rs.]	17516	11968
11	Per hectare yield of agriculture produce [Kg.]*		
a)	Paddy	914	1058
b)	Wheat	2096	1867
c)	Jowar	988	1342
d)	Maize	2949	2072
e)	Gram	1344	932
f)	Tuar	1679	825
g)	Soybean	1464	1132
12	Electrified villages as percent to total inhabited villages	99.68	97.04
13	Energised pump sets per thousand hectare	104	60

\*Figures relate to the year 2003-2004 [Final Forecast]

6.8 The above table shows that district Chhindwara is agriculturally advanced as for most of the important crops like wheat, maize, gram, tuar and soybean the per hectare yield of the district is much higher than the State level average yield of such crops reflected over per-capita production of food grains which is 317 kg as against the State average of 266 kg. The per-hectare use of fertilizer [though less than State average figure] and per-capita net cropped area are substantial resulting ultimately in enhanced per-hectare yield and also advanced status of gross value of agriculture produce per hectare.

The district has immense forest wealth as the percentage of forest area to total geographical area is 40.42 as against the State average of 26.65 percent which has direct impact over the average rainfall and moderate climatic nature of the area supporting the cultivation of orange crop with much higher return as compared to traditional crops. Moreover, the area has immense scope for development of forest based secondary occupations.

For most of the indicators the performance of the district is close to the State level performance resulting ultimately in viability of agricultural occupation.

#### **DETAILS OF KRISHI VIGYAN KENDRA, CHHINDWARA BASED ON THE SECONDARY INFORMATION**

6.9 Established in the year 1983, the K.V.K. is located in the Chandangaon area of Chhindwara district. The institution is being run under the overall control of Jawahar Lal Nehru Krishi Vishwa Vidyalaya [J.N.K.V.V.], Jabalpur with Training Organiser as head of the institute.

Against the total sanctioned strength of 16 number of staff members, the institution, at present has 11 number of staff members, the institution, at present has 6 number of scientific staff with one Training Organiser and five Training Associates which is as per the quota of sanctioned strength followed by two filled-in posts of Technical Assistants against the sanctioned strength of five such personnel and three number of non-technical staff against the sanctioned strength of five number of non-technical personnel. Thus, at present, the total number of staff in position is 11 against the sanctioned strength of 16 persons. The number of staff in position though is fairly enough to carry on with the activities of K.V.K. but the filling-in of the all the five number of the posts of Technical Assistants will definitely add more efficiency in performance of technical functions.

6.10 The K.V.K. has its own administrative building with farmers hostel and threshing floor with existence of demonstration units like dairy unit, poultry unit, nursery and vermi compost pits that shows the fair equipage of the institution for performing various technical functions.

6.11 The farm area of the K.V.K. is 20 hectares, entirely irrigated and cultivated with 3 number of tube wells and equal number of electric engines. As on the date of the survey the institution has one number of four wheeler and two number of two wheelers adding efficiency to various functions being performed by the K.V.K.

6.12 The K.V.K. has adequate number of agriculture implements as detailed below;

1. Tractor – 1
2. M.B. Plough – 1
3. Cultivator – 1
4. Tractor drawn Ferti seed drill – 2
5. Thresher – 2
6. Trolley – 1

6.13 These variety of implements are, more or less, sufficient to do the extension work with reasonable efficiency.

**6.14 In short, the K.V.K., Chhindwara has fair extent of infrastructure to perform its various activities with reasonable convenience.**

6.15 Regarding budget provision, during the year 2003-2004 the K.V.K. has received an allocation of Rs. 28.45 lakh with expenditure of entire amount. Major amount of Rs. 27.60 lakh has been made available for pay and allowances, training etc whereas only marginal amount of Rs. 0.85 lakh has been allocated for non-recurring items like purchase of equipment, books etc. Since the data for 2001-2002 and 2002-2003 has not been given, information in tabular form has not been presented.

6.16 The information regarding technical performance has been collected under the heads of;

- Vocational Training
- In Service Training
- Front Line Demonstration
- On Farm Testing

6.17 In what follows an attempt has been made to present the details of above mentioned items.

## VOCATIONAL TRAINING

6.18 Vocational training is not only limited to subjects relating to agriculture but supposed to cover various subjects relating to activities allied to agriculture also. The table below shows the details;

Table No. 6.2  
Status of Vocational Training

Sl. No.	Subject	No. of trainings organised -2003-2004			Total no. of trainees 2003-2004
		Adopted Villages	Cluster Villages	Other Villages	
1	2	3	4	5	6
1	Crop Production	10	-	4	260
2	Horticulture	3	-	3	304
3	Plant Protection	2	-	8	244
4	Veterinary Services	-	-	-	-
5	Home Science	-	-	-	-
6	Ag. Engineering	3	-	1	69
7	Training of Rural Youth for Self Employment				
a.	Book Keeping	1	-	2	62
b.	Vermi Compost	1	-	1	27
c.	Tailoring	1	-	1	25
d.	Spray and Duster	1	-	1	30
	Total	22	-	21	1021

Note : Other villages [Col. 5] mean those villages of the district where the training programmes of Agriculture. Department are imparted through K.V.K.

6.19 One fact has very clearly come out from the above table is that the cultivators are basically interested in enhancing productivity of agronomical and horticultural crops with the result maximum number of 30 training programmes have been organised in adopted and other villages which is 69.77 percent of total of 43 number of training courses organised in the year 2003-2004 with maximum number of attendance of 808 number of trainees accounting for 79.14 percent of total of 1021 number of trainees. The situation seems obvious as the cultivators are interested in enhancing their household income through improved farming practices over which they have control over resources backed by knowledge borne of years of experience. The complete absence of any training programme for veterinary services and home science is a matter of concern as these are the areas which have immense promise for generation of income and employment in rural areas that arrest the tendency of migration during lean season of agriculture. The K.V.K. may make special efforts to organize training programmes on such subjects. Regarding training of rural youth for self employment, only 9 number of training courses have been organised in adopted and other villages attended by 144 number of trainees which is 14.10 percent to total number of 1021 trainees attending the vocational training courses. The achievement is fair as it has normally been seen that in rural areas the young persons are usually not much interested in such training activities due to absence of placement guarantee. **Complete absence of organisation of any training programme in cluster villages is a definite gap in performance.** Cluster villages are usually the peripheral villages of adopted villages where the technological impact of K.V.Ks. efforts are supposed to percolate through various forward linkages. Trainings organised in cluster villages give momentum to such percolation process. The K.V.K., Bhopal has organised 23 number of vocational training courses in areas of cluster villages which have made definite dent over the awareness levels of cultivators about new and prevailing technology relating to agriculture. **The K.V.K., Chhindwara may organize vocational training courses among cluster group of villages in coming years.**

## IN SERVICE TRAINING

6.20 In-service training is provided to the field functionaries of the line departments of Agriculture, Veterinary, Horticulture and Forest. The following table shows the details of training provided;

Table No. 6.3  
Status of In-service Training

Sl. No.	Subject	No. of trainings organised in the year 2003-04		Total number of trainees 2003-04
		On campus	Off campus	
1	2	3	4	5
1	Crop Production	1	-	25
2	Agriculture Engineering	1	-	10
3	Horticulture	1	-	10
4	Plant Protection	1	-	15
	Total	4	-	60

6.21 The position of organizing four number of training programmes with attendance of 60 number of trainees in the year 2003-2004 is somewhat satisfactory. However, the trainees from the office of the Chief Executive Officer, Zila Panchayat, implementing the scheme of rural development pertaining to creation of community and individual assets which have direct impact over enhancement of household income, should have been invited. The role of such personnel is important to implement various programmes relating to training of rural youth which is one of the basic responsibilities of K.V.K. **Any programme of in-service-training should have duration of at least two days as usual the first day is practically lost awaiting for the arrival of the trainees. The K.V.K. scientists should have a constant liaison with the district collector to make such training programmes meaningful.**

## FRONT LINE DEMONSTRATION

6.22 The special features of F.L. Ds. are;

- These demonstrations are conducted under the close supervision of the scientists of the K.V.K.
- Only newly released technologies or those likely to be selected in near future are selected for conducting F.L.Ds.
- F.L.Ds. are organised in a block of two to four hectares of land involving all those farmers whose plots fall in the identified demonstration blocks.
- Only critical inputs and training are provided from the scheme budget. Remaining inputs are supplied by farmers themselves.
- The target audience of F.L.Ds. is both farmers and extension officers.
- The F.L.Ds. are supposed to generate data relating to factors leading to higher crop yields and constraints under various farming conditions.

6.23 The table below shows the number of F.L.Ds. conducted during the year 2003-04.

Table No. 6.4  
Status of Front Line Demonstrations

Sl. No.	Subjects	No. of demonstrations organised 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Pulses	20	-
2	Oil Seeds	20	-
3	Other than pulses and oilseeds	90	-
	<b>Total</b>	<b>130</b>	<b>-</b>

6.24 Since organizing F.L.Ds. is one of the most important functions of the K.V.K. as through this activity the various technologies regarding agriculture are tested on the farmer's fields, the complete absence of such demonstrations in cluster villages is a serious lapse. In case of K.V.K., Bhopal 142 number of F.L.Ds. have been organised in cluster villages. The K.V.K., Chhindwara with fair equipage of personnel and implements could have organised F.L.Ds. in cluster villages to have wider coverage of demonstrating agriculture related technologies that could have percolated gradually to cover the greater part of the district. **The K.V.K., Chhindwara may look into this matter and prepare modalities for future planning.**

### ON FARM TESTING

6.25 On farm testing is a part of adaptive research that takes into account existing technology and its application over defined areas and defined group of farmers.

The procedure of on farm testing has five steps viz.,

- Diagnosis
- Planning
- Experimentation
- Assessment/evaluation of results
- Recommendation and diffusion.

### DIAGNOSIS

In this step, an understanding of farmer's circumstances and practices is developed in order to understand the farming system, possible productive problems and offer possible solutions. It is a continuous process practiced in every cycle of research. Normally the Participatory Rural Appraisal [P.R.A.] technique is used for having an insight into the problems of farming communities.

### PLANNING

The planning involves setting-up of priorities in order to improve research efficiency in terms of research benefits/costs by identifying following kinds of problems;

- Problems causing large productive loss.
- Problems that occur frequently.
- Problems that affect many farmers and their major crops.

### EXPERIMENTATION

This step includes exploring production problems, testing possible solutions and demonstrating them on the farms.

## ASSESSMENT

Under this phase the results of on farm testing are analysed taking primarily into consideration the reactions and opinions of farmers. The results of the assessments are then used to plan future research.

## RECOMMENDATION AND DIFFUSION

On the basis of on farm testing the researchers formulate recommendations/ non-recommendations for demonstration on larger area. The diffusion of new technology is done mainly by the **farmer's who** once convinced of the benefits of new technology advise their fellow cultivators to adopt the system.

6.26 Against this background, the status of O.F.T. in the year 2003-2004 has been shown in the following table;

Table No. 6.5  
Status of On Farm Testing

Sl. No.	Subject	No. of O.F.Ts. organised 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Agronomy	4	-
2	Horticulture	4	-
3	Ag. Engineering	5	-
4	Agro Forestry	2	-
	<b>Total</b>	<b>15</b>	<b>-</b>

6.27 The organisation of only 15 number of on farm testing in one year that too only in adopted villages is far from being satisfactory, particularly when this activity is most important for implementation of prevailing technology relating to agriculture. The matching figure of K.V.K., Bhopal is organisation of 200 number of O.F.Ts. equally distributed between adopted and cluster villages. **The K.V.K., Chhindwara may look into the matter and may attempt to organize more number of O.F.Ts. covering cluster villages as well in coming years.**

6.28 Besides organizing training courses as laid down in the mandates of K.V.K. i.e. Vocational Training, In Service training, Front Line Demonstration and On Farm Testing, the K.V.K., Chhindwara has also organised other training programmes in liaison with the offices of district administration. The table below shows the details;

Table No. 6.6  
Record of Other Training Courses

Sl. No.	Topic	Duration	No. of participants		
			2001-2002	2002-2003	2003-2004
1	2	3	4	5	6
1	Plant Protection	2 days	-	-	40
2	Agr. Engineering	2 days	-	-	40
3	Vermi Compost	2 days	-	-	40
4	Bee Keeping	3 days	-	-	40
5	Spray and Duster	3 days	-	-	40
6	Storage of Food Grains	2 days	-	-	40
7	Nadep	2 days	-	-	40
	<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>280</b>

- 6.29 Organisation of training courses of seven number of topics all important to rural economy with 280 number of participants is somewhat satisfactory. Training duration regarding agriculture engineering that basically includes topics like repair and binding of motor etc. should have been for at least a week for more meaningful transaction. However, every such training programme should have minimum duration of at least three days as usually the first day is lost in observing formalities. A few days training courses on topics like home science, growing of medicinal crops, agro-forestry and water management could have been organize to have a wider coverage of activities.
- 6.30 One of the important functions of the K.V.K. is to conduct specific research to improve the quality of agriculture produce, the details of which are given below;

Table No. 6.7  
Status of Specific Research

1	Topic of Research 2	Year 3	Impact Over			
			Production 4	Pest Control 5	Improved Animal Breed 6	Others [Specify] 7
1	Integrated animal production system	2003-2004	100 percent over F.P.	-	-	-
2	Integrated weed management in Soybean	2003-2004	50 percent increase over F.P.	-	-	-

F.P. – Farmers practice

- 6.31 The impact of specific research is satisfactory as indicated by their effect on production as compared to farmer practice. Since the K.V.K., Chhindwara is functioning from the year 1983, more number of specific research particularly concerning horticulture crops could have been undertaken.
- 6.32 Each K.V.K. is supposed to hold the meeting of Scientific Advisory Committee twice in a year for performing following functions;
- Providing necessary guidance and leadership in developing infrastructure facilities and thereby supporting the Kendra to fulfil its objectives.
  - Reviewing of the annual and five year plans of the Kendra.
  - Reviewing the progress of the activities and achievements and offering necessary guidance/suggestions to improve the functioning of the Kendra.
  - Approval of the Annual Accounts of the Kendra before the same is sent to the Chartered Accountant/Statutory Auditor for audit.
  - Adoption of the Statement of Audited Accounts before the same is sent to the Council.
  - Approval of the recommendations of the Recruitment/Selection committee for appointment of staff on vacant posts.

6.33 The Scientific Advisory Committee will consist of following members;

- |    |   |             |
|----|---|-------------|
| 1. | Head of the host institution  | Chairperson |
| 2. | Director, Extension of concerned SAU  | Member      |
| 3. | Zonal Coordinator of the concerned zone   | Member      |
| 4. | Representative of ICAR Instt./ICAR Regional Research Station if located in the district or nearby | Member      |



5.	Associate Director, Research & Extension of the Zonal Research Station in which KVK is located	Member
6.	District officers of the line departments such as Agriculture, Horticulture, Animal Husbandry, Soil conservation, Social/Agroforestry, Sericulture, Fisheries, Irrigation, Social Welfare, Small Scale Industries etc.	Members
7.	Representative of the Lead Bank of the District	Member
8.	Farm Radio Officer of the AIR in which KVK is located	Member
9.	Representative of Doordarshan Centre in which KVK is located	Member
10.	Two representatives of the farmers - one small and one big nominated by the Head of the Institution	Member
11.	Two representatives of Farm Women nominated by Head of the Institution	Members
12.	Training Organiser, KVK	Member Secretary

6.34 The K.V.K., Chhindwara has arranged the meeting of Scientific Advisory Committee twice in the year 2003-2004 as laid down by Indian Council of Agriculture Research, Government of India.

6.35 The K.V.K., Chhindwara has continuously interacted with district administration, three-tier institution of Panchayati Raj and progressive cultivators of the district and took valuable guidance from them. Publicity measures like organizing Kisan Melas, Field Days, use of Audio-Visual Aids, arranging T.V. Interviews and Radio talks were attempted to spread the knowledge about utility of K.V.K. among rural population.

## **RESULTS OF THE SURVEY – VILLAGE PARTICULARS**

6.36 The study has covered sixty number of villages at the rate of ten number of villages per K.V.K. with following bifercations;

- Three number of Adopted Villages
- Six number of Cluster Villages
- One number of Control Village

The bifurcation as shown above is common to all the six K.V.Ks. covered under the study. The table below shows a few important demographic details of the selected villages of K.V.K., Chhindwara;

Table No. 6.8  
Demographic Particulars

Sl. No.	Name of the Village	No. of households as on the date of survey	Total population Census 2001	Of which		Proportion of S.C. population [%]	Proportion of S.T. population [%]	Literacy rate [%]	Household size
				Males Census 2001	Females Census 2001				
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Simriya Kalan	105	733	377	356	13.0	3.0	86.6	5
2	Thunia Ddana	143	1335	709	626	15.5	15.8	61.5	6
3	Moadai	95	677	357	320	8.3	41.8	70.1	6
	<b>Total – I</b>	<b>343</b>	<b>2745</b> [34.19]	<b>1443</b> [35.03]	<b>1302</b> [33.30]	-	-	-	-
<b>CLUSTER VILLAGES</b>									
4	Lahgurua	104	2288	1160	1128	29.1	49.7	60.7	6
5	Omariya	45	443	221	222	0.0	75.6	60.0	5
6	Munga	93	687	355	332	5.2	64.2	66.5	5
7	Baranga	130	732	346	386	4.5	84.6	57.6	6
8	Char-Gaon-Bhat	55	262	138	124	32.8	17.6	63.2	5
9	Oseria	80	572	299	273	0.3	46.3	66.5	6
	<b>Total – II</b>	<b>507</b>	<b>4984</b> [62.07]	<b>2519</b> [61.16]	<b>2465</b> [63.04]	-	-	-	-
<b>CONTROL VILLAGE</b>									
10	Pipariya Birsa	57	300	157	143	2.7	40.7	58.0	5
	<b>Total – III</b>	<b>57</b>	<b>300</b> [3.74]	<b>157</b> [3.81]	<b>143</b> [3.66]	-	-	-	-
	<b>Grand Total I+II+III</b>	<b>907</b>	<b>8029</b> [100]	<b>4119</b> [100]	<b>3910</b> [100]	-	-	-	-

Source – Census 2001

Note – Figures in brackets show percentage to total.

**6.37** The **total population** of the ten identified villages as per census – 2001 is 8029 which is **0.57 percent** to total rural population of district Chhindwara. The adopted villages cover 34.19 percent of population as compared to total population of ten number of identified villages covered under the study while for the cluster villages this percentage is 62.07 and for control village, the percentage coverage is 3.74. **Population wise largest village** is Lahgurua [cluster village with population of 2288 persons] while the smallest village is Char-Gaon-Bhat [cluster village with population of 262 persons]. Except for the villages Omariya and Baranga where female population is more than male population, **in rest of the eight number of villages** the trend is otherwise. Out of the ten identified villages in **seven number** of villages viz. Moadai, Lahgurua, Omariya, Munga, Baranga, Oseria and Pipariya Birsa the percentage of S.T. population is much more than percentage of S.C. population. In villages like Omariya, Munga and Baranga these percentages are as high as 75.6, 64.2 and 84.6 respectively. The **literacy rate** that ranged between 57.6 percent for village. Baranga [cluster village] to 86.6 percent for village Simriya Kalan [adopted village] is close to the district percentage literacy level of 66.03 and State percentage literacy level of 64.11. In villages like Simriya Kalan, Moadai, Munga and Oseria the percentage literacy is as high as 86.6, 70.1, 66.5 and 66.5 respectively which are higher than the percentage literacy levels of both district and State. **One very startling fact as revealed by above information is that**

even with substantial tribal population in identified villages covered under the study, the percentage literacy is more than satisfactory thus defying one of the fixed notions that areas with substantial tribal population usually have low literacy rate. The extensive literacy campaign initiated by the government has thus started showing results as the tribals have started understanding the value of literacy, particularly in our area of study.

## WORK FORCE

6.38 An analysis of the information regarding workforce is important as it gives an idea of persons engaged in various occupations along with the extent of dependent population not pursuing any occupation. The table below shows the details;

Table No. 6.9  
Status of Work Participation

Sl. No	Name of the Village	Work participation rate [%]			Proportion of main workers [%]			Proportion of Marginal workers [%]			Proportion of Non-workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Simariya Kalan	47.5	51.5	43.3	46.4	50.7	41.9	1.1	0.8	1.4	52.5	48.5	56.7
2	Thunia Ddana	45.4	51.8	38.2	39.6	50.6	27.0	5.8	1.1	11.2	54.6	48.2	61.8
3	Moadai	48.4	50.7	45.9	23.2	39.5	5.0	25.3	11.2	40.9	51.6	49.3	54.1
<b>CLUSTER VILLAGES</b>													
4	Lahgurua	40.1	51.7	28.1	28.5	48.2	8.2	11.6	3.5	19.9	59.9	48.3	71.9
5	Omariya	51.0	49.8	52.3	35.7	45.7	25.7	15.3	4.1	26.6	49.0	50.2	47.7
6	Munga	50.9	55.8	45.8	34.8	49.9	18.7	16.2	5.9	27.1	49.1	44.2	54.2
7	Baranga	35.1	54.0	18.1	19.9	39.3	2.6	15.2	14.7	15.5	64.9	46.0	81.9
8	Char-Gaon-Bhat	56.1	61.6	50.0	44.7	59.4	28.2	11.5	2.2	21.8	43.9	38.4	50.0
9	Dseriya	53.3	55.9	50.5	28.7	53.8	1.1	24.7	2.0	49.5	46.7	44.1	49.5
<b>CONTROL VILLAGE</b>													
10	Pipariya Birsa	40.3	47.8	32.2	27.3	43.9	9.1	13.0	3.8	23.1	59.7	52.2	67.8

Source – Census 2001

6.39 The work participation rate that ranged between 35.1 percent in village Baranga [cluster village] to 56.1 percent in village Char-Gaon-Bhat [cluster village] is in general more among males than females except for the village Omariya [cluster village] where a reverse trend is visible which is somewhat remarkable that shows the awareness among the female population about value of work for augmenting family income. The proportion of marginal workers is usually much low as compared to the proportion of main workers indicating the overall lack of additional work opportunities in our area of study particularly generated by various welfare schemes like Gramya, home science activities, S.H.Gs, Jawahar Gram Samridhi Yojna, establishment of Sericulture unit etc which generally generate marginal employment opportunities. For all the ten identified villages the proportion of female marginal workers is more than that of males which is rather obvious as the females do odd jobs in their spare time after completing household obligations. Since our area of study is predominated by tribal population, higher per centage of female marginal workers is somewhat matching to the trend as in the tribal communities females also do the work to support the household.

**Regarding non-workers that ranged between 43.9 percent in village Char-Gaon-Bhat [cluster village] to 64.9 percent in village Baranga [cluster village] presents a dismal picture as it shows higher percentage of dependent population consisting of children, old person, infirms and unemployed who are not in a position to contribute anything towards family income.**

6.40 The table shows the occupational distribution of the population residing in ten number of village covered under the study.

Table No. 6.10  
Occupational Distribution

Sl. No	Name of the Village	Proportion of Cultivators to total Workers [%]			Proportion of Agr. Labourer to total workers [%]			Proportion of workers in household industries to total workers [%]			Proportion of other workers to total workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Simariya Kalan	55.7	52.1	60.4	30.5	26.3	35.7	4.3	5.2	3.2	9.5	16.5	0.6
2	Thunia Odana	60.4	63.8	55.2	35.	29.2	43.9	0.0	0.0	0.0	4.6	7.1	0.8
3	Moadai	34.1	38.1	29.3	59.8	51.9	69.4	0.3	0.6	0.0	5.8	9.4	1.4
<b>CLUSTER VILLAGES</b>													
4	Lahgurua	23.3	25.7	18.9	32.8	16.0	64.7	1.7	1.3	2.5	42.1	57.0	13.9
5	Omariya	55.8	60.0	51.7	27.0	25.5	28.4	0.9	1.8	0.0	16.4	12.7	19.8
6	Munga	43.1	43.4	42.8	22.6	13.1	34.9	4.6	5.1	3.9	29.7	38.4	18.4
7	Baranga	38.1	48.1	11.4	5.1	5.9	2.9	3.5	2.7	5.7	53.3	43.3	80.0
8	Char-Gaon-Bhat	66.7	67.1	66.1	29.3	25.9	33.9	0.0	0.0	0.0	4.1	7.1	0.0
9	Dseriya	46.2	76.0	10.1	51.5	20.4	89.1	0.0	0.0	0.0	2.3	3.6	0.7
<b>CONTROL VILLAGE</b>													
10	Pipariya Birsa	33.1	38.7	23.9	62.0	53.3	76.1	0.0	0.0	0.0	5.0	8.0	0.0

Source – Census 2001

6.41 Agriculture is the main occupation of the ten number of identified villages covered under the study as the combined average percentage of cultivators and agriculture labour is 81.3 to total workers. Against the total number of ten villages, in six villages viz. Simariya Kalan, Thunia Ddana, Omariya, Munga, Baranga and Chargaon Bhat, the proportion of cultivators is more than the proportion of agriculture labour to total workers which is a positive indicator of viable status of agriculture in these six village. In rest of the four villages viz. Moadai, Lahgurua, Oseria and Pipariya Birsa the reverse trend is true. In general the proportion of male cultivators to total workers is more than that of females **except in village Simariyan Kalan where percentage of female cultivators is 60.4 as against 52.1 percent of male cultivators. In case of agriculture labour percentage of female participation in general is more than male participation which seems natural as in villages with substantial tribal population where the work culture among females is very common-at times more than even males.** The proportion of household workers to total workers is far from being satisfactory that ranged between 0.9 percent in village Omariya to 4.6 percent in village Munga. One of the important causes of rural poverty is absence of secondary occupations which give household income support particularly in agrarian economy. It also reduces pressure on land with the result the occupation of agriculture becomes more viable. Usually the proportion of other workers to total workers is much lower than that of

cultivators and agriculture labour which broadly indicates the absence of activities other than agriculture in our sample villages. **The villages like Lahgurua, Munga and Baranga are exceptions where the percentage of other workers to total workers is 57.0, 38.4 and 43.3 respectively which is indicative of the positive fact that in these villages avenues of employment other than agriculture is available.**

## LAND USE DETAILS

6.42 The table below shows the land use details of the ten identified villages covered under the study;

Table No. 6.11  
Land Use Details

In hectare

Sl. No.	Name of the Village	Total geographical area	Gross cropped area	Forest	Not available for cultivation	Cultivable waste	Irrigation				Total irrigated area	Total unirrigated
							Canal	Pond	Wells	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Simariyan Kala	417	413 [99.04]	0	4	41	0	0	150	0	150 [36.62]	222
2	Thunia Ddana	430	383 [89.07]	6	47	23	0	0	99	32	131 [34.20]	229
3	Moadai	369	334 [90.51]	0	35	35	0	0	123	26	149 [44.61]	150
<b>Adopted Village I</b>		1216	1130 [92.93]	0	86	99	0	0	372	58	430 [38.05]	601
4	Lahgurua	268	239 [89.18]	0	29	21	0	0	62	27	89 [37.24]	129
5	Omariya	435	252 [57.93]	178	5	25	0	0	4	0	4 [1.59]	223
6	Munga	213	183 [85.92]	0	30	12	0	0	34	0	34 [18.58]	137
7	Baranga	253	215 [84.98]	3	35	16	0	0	29	0	29 [13.49]	170
8	Char-Gaon-Bhat	169	152 [89.94]	0	17	20	0	0	107	7	114 [75.00]	18
9	Dseriya	488	424 [86.89]	0	64	21	0	0	169	40	209 [49.29]	194
<b>Cluster Village II</b>		1826	1465 [80.23]	181	180	115	0	0	405	74	479 [32.70]	871
10	Pipariya Birsa	167	143 [85.63]	0	24	7	0	0	51	19	70 [48.95]	66
<b>Control Village III</b>		167	143 [85.63]	0	24	7	0	0	51	19	70 [48.95]	66
<b>Total – I+II+III</b>		3209	2738 [85.32]	181	290	221	0	0	828	151	979 [35.76]	1538

Source – Census, 2001

Note – Col. –4 = Figures in brackets show percentage to total geographical area.

Col. – 12 = Figures in brackets show percentage to gross cropped area.

6.43 The gross cropped area of the identified ten villages is 85.32 percent to total geographical area that confirms the basic fact that main occupation of these villages is agriculture. The survey area is not rich in forest resources as the total area under forest is 5.64 percent to total geographical area of the ten identified villages.

6.44 Regarding irrigation, the percentage of gross irrigated area to gross cropped area is 35.76 percent which is more than the district and state average figures of 22.51 percent and 28.54 percent respectively. In adopted three villages this figure ranged between 34.20 percent for village Thuniay Ddana to 44.61 percent for village Moadai whereas in cluster villages this range is 1.59 percent for village Omariya to 75.00 percent for Char-Gaon-Bhat. The overall status of irrigation is quite satisfactory.

6.45 Cultivable waste land, that provides promise for expanding agriculture activities is 221 hectares for ten number of identified villages which is 6.88 percent to total geographical area, assuring the fact that through the intervention of K.V.K. the expansion of agriculture is possible.

## RURAL ELECTRIFICATION

6.46 The table below shows the details;

Table No. 6.12  
Status of Rural Electrification

Sr. No.	Name of the village	Village Electrified		Regular supply		If irregular supply actual hrs. of supply
		Yes	No	Yes	No	
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	1			1	14
2.	Thunia Ddana (Chhindwara)	1			1	9
3.	Moadai (Chhindwara)	1			1	8
	<b>Adopted Village</b>	3			3	
4.	Lahgurua (Muhked)	1			1	14
5.	Omariya (Muhked)	1			1	14
6.	Munga (Parasiya)	1			1	12
7.	Baranga (Parasiya)	1			1	12
8.	Char Gaon Bhat (Chhindwara)	1			1	10
9.	Dseriya (Chhindwara)	1			1	10
	<b>Cluster Village</b>	6			6	
10	Pipariya Birsra (Chhindwara)	1			1	10
	<b>Control Village</b>	1			1	
	<b>Total</b>	10			10	

\*The information in brackets shows the name of the Development Block where the village is located. This information will be common to all the subsequent tables.

- 6.47 The above table shows that all the ten villages covered under the study are electrified with irregular power supply situation ranging between 8 hours per day for village Moadai [adopted village] to 14 hours per-day for villages Lahgurua and Omariya [both cluster villages]. The overall power shortage condition in the State is responsible for such situation. However, average of 11 hours power supply per-day in identified ten villages covered under the study is perhaps, sufficient for pursuing agriculture related activities in convenient manner.
- 6.48 The impact of rural electrification is directly visible over number of pump-sets energized. The table below shows the details;

Table No. 6.13  
Status of Pump Sets Energised

Sr. No.	Name of the village	Pump sets energized	
		Electricity (No.)	Diesel (No.)
1	2	3	4
1.	Simariya Kala (Muhkhed)	0	
2.	Thunia Ddana (Chhindwara)	80	
3.	Moadai (Chhindwara)	75	
	<b>Adopted Village</b>	155	
4.	Lahgurua (Muhked)	80	
5.	Omariya (Muhked)	40	
6.	Munga (Parasiya)	52	
7.	Baranga (Parasiya)	70	
8.	Char Gaon Bhat (Chhindwara)	30	
9.	Dseriya (Chhindwara)	25	
	<b>Cluster Village</b>	297	
10	Pipariya Birsa (Chhindwara)	30	
	<b>Control Village</b>	30	
	<b>Total</b>	482	

The total number of pump sets energized [electricity] is 482 [as on the date of survey] which is 0.75 percent of total number of pump sets energized for district that stands at 64584 for the year 1999-2000. It is worth mentioning here that for district Chhindwara the number of energized pump set per thousand hectare is 104 as against the state average of 60 that indicates attitudinal positiveness of the cultivators of district Chhindwara towards pursuing agriculture related activities. **The rate of energisation of pump sets per village for adopted and cluster villages is around 50 which is higher than that of control village having no intervention of K.V.K. that indicates the positive impact of the efforts of K.V.K. towards technology transfer inducing the cultivators to resort to better modes of cultivation.**

## HOUSEHOLD INDUSTRIAL UNITS

6.49 There is complete absence of household industrial units in all the ten number of villages covered under the study. Though in table no. 6.10 presence of workers in household industries have been shown in scanty manner but since such information pertains to the year 2001 which with the passage of years might have become extinct. As said earlier, one of the basic causes of rural poverty is absence of secondary sector occupation which could absorb excess labour force thereby easing the pressure on land and solve the existing problem of underemployment in agriculture sector. Since the villages under study are agriculturally viable, any attempt to establish agro based industries will be helpful in augmenting household income.

## COOPERATIVES

6.50 Formation of primary level cooperative societies as reflected in plan documents, basically aims at improving the socio-economic status of the weaker section of society and in turn, arrest the tendency of their exploitation. The table below shows the status of existence of cooperative societies in our area of study.

Table No. 6.14  
Cooperative Societies

In number

Sr. No.	Name of the village	Agriculture co-operative credit society	Fishermen co-operative society	Milk co-operative society	Co-operative. marketing society	Others specify
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	0	0	0	0	0
2.	Thunia Ddana (Chhindwara)	3	3	10	10	0
3.	Moadai (Chhindwara)	0	0	0	0	0
	<b>Adopted Village</b>	3	3	10	10	0
4.	Lahgurua (Muhked)	0	0	1	0	1
5.	Omariya (Muhked)	0	0	0	0	0
6.	Munga (Parasiya)	0	0	0	0	0
7.	Baranga (Parasiya)	0	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	0	0	0	0	0
9.	Dseriya (Chhindwara)	0	0	0	0	0
	<b>Cluster Village</b>	0	0	1	0	1
10	Pipariya Birsa (Chhindwara)	0	0	0	0	0
	<b>Control Village</b>	0	0	0	0	0
	<b>Total</b>	3	3	11	10	1

6.51 Existence of total number of 28 number of cooperative societies covering wide range of fields is somewhat remarkable, particularly for adopted villages where most of the cooperative societies are existing.

6.52 Present level and prospect of future development of any area can fairly be assessed by the extent of availability of basic and infrastural facilities in and around the villages. In what follows an attempt has been made to show the availability of such facilities in ten number of villages covered under the study.

### BASIC FACILITIES

6.53 The table below shows the location of basic administrative facilities within and around the ten villages identified for the study;



Table No. 6.15  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	District head quarter away from the village KM	Tahsil head- quarter		Block head quarter	
			Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	25		25		12
2.	Thunia Ddana (Chhindwara)	10		10		10
3.	Moadai (Chhindwara)	10		10		11
	<b>Adopted Village</b>					
4.	Lahgurua (Muhked)	22		22		14
5.	Omariya (Muhked)	28		28		14
6.	Munga (Parasiya)	12		12		12
7.	Baranga (Parasiya)	17		16		16
8.	Char Gaon Bhat (Chhindwara)	8		10		10
9.	Dseriya (Chhindwara)	6		6		5
	<b>Cluster Village</b>					
10	Pipariya Birsa (Chhindwara)	11		11		11
	<b>Control Village</b>					
	<b>Total</b>	10		10		10

Table No. 6.15 [Contd...]  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	Gram Panchayat		Police Station/sub station	
		Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	8	9	10	11
1.	Simariya Kala (Muhkhed)		1		3
2.	Thunia Ddana (Chhindwara)	0			10
3.	Moadai (Chhindwara)		2		12
	<b>Adopted Village</b>	1			
4.	Lahgurua (Muhked)	0			3
5.	Omariya (Muhked)		3		6
6.	Munga (Parasiya)	0			2
7.	Baranga (Parasiya)		2		4
8.	Char Gaon Bhat (Chhindwara)		2		10
9.	Dseriya (Chhindwara)		1		5
	<b>Cluster Village</b>	2			
10	Pipariya Birsa (Chhindwara)		1		10
	<b>Control Village</b>	0			
	<b>Total</b>	3	7		10

6.54 For all the identified ten villages the location of district headquarter is away from the village ranging between 6 kms for village Dseriya [cluster village] to 20 kms for village Omariya [cluster village]. Similar is status of distance for tahsil and block headquarter. Normally such distance factor regarding location of important administrative units has some reverse effect on socio-economic development of any area since the officials who matters remain slightly unaware about the problems of the area as their visits to such habitates are usually infrequent. However, location of Gram Panchayat within 3 number of villages and within easy distance of seven villages is somewhat encouraging as the villagers have sufficient scope of remaining aware about the developmental activities being performed by Gram Panchayat. For most of the village the location of police station is within occassable distance ensuring, to some extent, safety of the inhabitants of identified ten number of villages.

### INFRASTRUCTURAL FACILITIES - ROADS

6.55 Roads are one of the basic infrastructures required for development of perhaps all the socio-economic parameters relating to human development. The status of backwardness of animal husbandry sector and horticulture in rural areas is mainly attributed by the absence of link roads as such products are perishable in nature requiring quick transport for sale in nearby big markets. Perhaps basic cause of the location of poultry and milk farms in nearby cities/towns is the availability of road facility for quick transport of the product in nearby market where even cold storage facilities are available. The table below shows the details;

Table No. 6.16  
Road Infrastructure

Sr. No.	Name of the village	Fair weather road		Kharanja road within the village 0 km
		Within the village 0 Km	Away from the village Km	
1	2	3	4	5
1.	Simariya Kala (Muhkhed)	0		0
2.	Thunia Ddana (Chhindwara)	0		0
3.	Moadai (Chhindwara)	0		
	<b>Adopted Village</b>			
4.	Lahgurua (Muhked)		3	0
5.	Omariya (Muhked)	0		0
6.	Munga (Parasiya)	0		0
7.	Baranga (Parasiya)	0		0
8.	Char Gaon Bhat (Chhindwara)	0		0
9.	Dseriya (Chhindwara)		5	0
	<b>Cluster Village</b>			
10	Pipariya Birsa (Chhindwara)	0		0
	<b>Control Village</b>			
	<b>Total</b>	8	2	10

Table No. 6.16 [Contd...]  
Road Infrastructure

Sr. No.	Name of the village	Link road to all weather road		All weather road	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	6	7	8	9
1.	Simariya Kala (Muhkhed)	0			3
2.	Thunia Ddana (Chhindwara)	0			4
3.	Moadai (Chhindwara)	0			3
	<b>Adopted Village</b>				
4.	Lahgurua (Muhked)	0			4
5.	Omariya (Muhked)	0			5
6.	Munga (Parasiya)	0			2
7.	Baranga (Parasiya)		3		3
8.	Char Gaon Bhat (Chhindwara)	0			2
9.	Dseriya (Chhindwara)		6		6
	<b>Cluster Village</b>				
10	Pipariya Birsa (Chhindwara)	0			4
	<b>Control Village</b>				
	<b>Total</b>	8	2		10

**6.56 The information contained in the above table reveals a satisfactory status of availability of road infrastructure in ten identified villages covered under the study.** In eight number of villages fair weather roads exist while in two villages the distance of this facility is within accessible limit. Karanja roads made of redimentary square shaped stone are available within all the villages ensuring convenient movement within the village particularly in rainy season with absence of slush around that usually is the source of many diseases, particularly water borne in rural areas. Link roads to all weather roads, being one of the prime agendas of Five ear Plans since the initiation of Minimum Needs Programme, are available within eight number of villages and within easy distance of remaining two number of villages linking all weather roads within an average distance of 3.5 kms away from ten number of identified villages.

Infrastructural Facilities - Railway Station, Bus Stand/Bus Stop/  
Post Office/S.T.D. Booth

6.57 The table below shows the details;

Table No. 6.17

## Facilities Regarding Railway Station, Bus Stand, Bus Stop, Post Office, STD Booth

Sr. No.	Name of the village	Railway station		Bus stand/Bus stop	
		within the village 0 Km	Away from the village Km	within the village 0 Km	Away from the village Km
1	2	3	4	5	6
1.	Simariya Kala (Muhkhed)		4	0	
2.	Thunia Ddana (Chhindwara)		12		3
3.	Moadai (Chhindwara)		4		2
	<b>Adopted Village</b>				
4.	Lahgurua (Muhked)		4		1
5.	Omariya (Muhked)		6		5
6.	Munga (Parasiya)		2		2
7.	Baranga (Parasiya)		4		4
8.	Char Gaon Bhat (Chhindwara)		10		3
9.	Dseriya (Chhindwara)		8		2
	<b>Cluster Village</b>				
10	Pipariya Birsa (Chhindwara)		10		2
	<b>Control Village</b>				
	<b>Total</b>		10	1	9

Table No. 6.17 [Contd...]

## Facilities Regarding Railway Station, Bus Stand, Bus Stop, Post Office, STD Booth

Sr. No.	Name of the village	Post office		STD booth	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	7	8	9	10
1.	Simariya Kala (Muhkhed)		1		1
2.	Thunia Ddana (Chhindwara)		3		3
3.	Moadai (Chhindwara)		3		3
	<b>Adopted Village</b>				
4.	Lahgurua (Muhked)		2	0	
5.	Omariya (Muhked)		3		3
6.	Munga (Parasiya)		2		2
7.	Baranga (Parasiya)		4		4
8.	Char Gaon Bhat (Chhindwara)		3		3
9.	Dseriya (Chhindwara)		1		1
	<b>Cluster Village</b>				
10	Pipariya Birsa (Chhindwara)		2		2
	<b>Control Village</b>				
	<b>Total</b>		10	1	9

- 6.58 Though no railway station is situated within any of the selected village but the location of this facility is within convenient reach of the sample villagers. With the availability of satisfactory road network and railway track within a distance of manageable limits, the entire transport infrastructure is supportive to the economics of ten selected villages covered under the study.
- 6.59 Regarding bus stand/bus stop, the facility is available within village Simariya Kala and in rest of the nine number of villages these facilities are located within a easy distance.
- 6.60 Though in non of the villages the post offices exist but their locations are within the easy reach of the villagers. Similarly for the facility of STD booths, which so far is an urban concept, is available within village Lahgurua [cluster village] while in rest of the 9 number of villages the facility is located within the easy reach of the villagers.
- 6.61 Thus, transport and communication wise the ten number of identified villages are in preferred position with positive contribution towards socio-economic development of the area as vouched by survey results.**

**Infrastructural Facilities - Agriculture Marketing, Fair Price Shop, Cold Storage**

- 6.62 Fair return to agriculture produce, to a great extent, is ensured by the availability of marketing facilities like mandi yards, cold storage facilities to avoid distress selling which are as important as making provision for agriculture inputs for enhancement of agriculture production. The table below shows the details of the availability of such facilities within and around the ten number of selected villages covered under the study.

Table No. 6.18  
Status of Agriculture Marketing, Fair Price Shops and Cold Storage

Sr. No.	Name of the village	Regular market		Weekly market		Mandi	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)		3		3		25
2.	Thunia Ddana (Chhindwara)		3		3		10
3.	Moadai (Chhindwara)		3		3		17
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)		3		3		22
5.	Omariya (Muhked)		6		6		28
6.	Munga (Parasiya)		2		2		10
7.	Baranga (Parasiya)		4		4		16
8.	Char Gaon Bhat (Chhindwara)		3		3		10
9.	Dseriya (Chhindwara)		5		5		5
	<b>Cluster Village</b>						
10	Pipariya Birsra (Chhindwara)		2		2		10
	<b>Control Village</b>						
	<b>Total</b>		10		10		10

Table No. 6.18 [Contd...]  
Status of Agriculture Marketing, Fair Price Shops and Cold Storage

Sr. No.	Name of the village	Sub-Mandi		Fair Price Shop		Cold Storage	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12	13	14
1.	Simariya Kala (Muhkhed)		20		1		25
2.	Thunia Ddana (Chhindwara)		10		3		10
3.	Moadai (Chhindwara)		8	0			10
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)		22	0			22
5.	Omariya (Muhked)		28		3		28
6.	Munga (Parasiya)		10		2		10
7.	Baranga (Parasiya)		14		2		15
8.	Char Gaon Bhat (Chhindwara)		10		3		10
9.	Dseriya (Chhindwara)		5		1		3
	<b>Cluster Village</b>						
10	Pipariya Birsa (Chhindwara)		10		1		10
	<b>Control Village</b>						
	<b>Total</b>		10	2	8		10

6.63 The above table shows that in non of the ten identified villages the facilities regarding regular markets or weekly markets exist though such infrastructures exist within manageable distance from ten identified villages. The mandies, submandies and cold storages are generally located for away from the villages with the exception of villages like Desriya [cluster village] and Moadai [adopted village] where these facilities are located within a manageable distance. Only in two villages viz. Maadai [adopted village] and Lahgurua [cluster village] the fair price shops are located within geographical limits of the villages while in 8 number of villages this facility is located within approachable limits. **District administration may consider organizing a regular market by providing basic infrastructure at village Lahgurua having population of 2288 persons which may serve as nucleus for marketing distinations of nearby adopted and cluster villages.**

## AGRO BASED INDUSTRIAL UNITS

6.64 Agro-based industrial units are important value additons in rural areas taking care of unemployment and under employment by providing sustainable income and thereby reducing the pressure on and. The table below shows the present status of agro-based industrial units in our sample villages;

Table No. 6.19  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Flour mill		Oil mill		Dal mill	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)	0			12		25
2.	Thunia Ddana (Chhindwara)	0			10		10
3.	Moadai (Chhindwara)	0			10		10
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)	0			22		22
5.	Omariya (Muhked)	0			28		28
6.	Munga (Parasiya)	0			10		12
7.	Baranga (Parasiya)		2		16		16
8.	Char Gaon Bhat (Chhindwara)		2		10		10
9.	Dseriya (Chhindwara)		1		5		6
	<b>Cluster Village</b>						
10	Pipariya Birsa (Chhindwara)		2		10		10
	<b>Control Village</b>						
	<b>Total</b>	6	4		10		10

Table No. 6.19 [Contd...]  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Saw mill		Repair of Agr. implements	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12
1.	Simariya Kala (Muhkhed)		25		25
2.	Thunia Ddana (Chhindwara)		10		3
3.	Moadai (Chhindwara)		10		10
	<b>Adopted Village</b>				
4.	Lahgurua (Muhked)		22		14
5.	Omariya (Muhked)		28		28
6.	Munga (Parasiya)		12		2
7.	Baranga (Parasiya)		15		4
8.	Char Gaon Bhat (Chhindwara)		10		3
9.	Dseriya (Chhindwara)		5	0	
	<b>Cluster Village</b>				
10	Pipariya Birsa (Chhindwara)		10		10
	<b>Control Village</b>				
	<b>Total</b>		10	1	9

6.65 The above table shows that except for flour mills non of the other industrial units like oil mill, dal mill and saw mill are located within the villages identified for the study. In case of flour mills, six number of villages have such units located within their geographical limits while in four villages the locational distance is within manageable limits not exceeding 2 kms. **The villages like Baranga and Dseriya having population of 732 and 572 persons respectively may have flour mills within the village limit as the population can sustain this activity. Dseriya is the only village where there is one unit pertaining to repair of agricultural implements. For villages like uniya Dadua [adopted village] Munga, Baranga and Char-Gaon-Bhat [all cluster villages] the repair units are located at a distance of 3 kms, 2 kms, 4 kms and 3 kms respectively which can be considered as manageable distance from rural point of view, thus offering sufficient avenues for repair of agricultural implements to all the ten identified villages covered under the study.**

## SOCIAL INPUTS – EDUCATION

### ELEMENTARY EDUCATION – PRIMARY LEVEL

6.66 The Directive Principles of Constitution of India envisages provision of free and compulsory education to all children upto the age of fourteen years of age before the commencement of 21<sup>st</sup> century. Now that the 21<sup>st</sup> century has set in, fresh dead lines have been drawn. The goals of the Universalisation of Elementary Education [U.E.E.] Programme area;

- Universal access to primary schooling facility within a radius of one km and a middle school within a radius of at least 3 kms.
- Universal enrolment of children of age group of 6 to 14 years.
- Universal retention of all enrolled children till they complete eight years of elementary schooling.

Against this background, the information has been collected from sample villages. The table below shows the details of primary level of education.

Table No. 6.20  
Status of Primary Level of Education

Sr. No.	Name of the village	Primary School					Non formal education	
		Within the village 0 km	With- in 1 km	With- in 2 km	With- in 3 km	> 3 km	Within the village 0 km	Away from the village km
1	2	3	4	5	6	7	8	9
1.	Simariya Kala (Muhkhed)	0						12
2.	Thunia Ddana (Chhindwara)	0						3
3.	Moadai (Chhindwara)	0						2
	<b>Adopted Village</b>							
4.	Lahgurua (Muhked)	0						22
5.	Omariya (Muhked)	0						3
6.	Munga (Parasiya)	0						5
7.	Baranga (Parasiya)	0						4
8.	Char Gaon Bhat (Chhindwara)				3			4
9.	Dseriya (Chhindwara)	0						5
	<b>Cluster Village</b>							
10	Pipariya Birsa (Chhindwara)	0						2
	<b>Control Village</b>							
	<b>Total</b>	9			1	0		10



6.67 The above table shows that with the exception of village Char-Gaon-Bhat [cluster village] where the primary school is located at distance of 3 kms, in rest of the nine number of villages the facility of primary school is available within the village periphery. One of the reasons of high literacy percentage in the villages covered under the study is locational advantage of this facility. Village Char-gaon-Bhat, with total population of 262 persons might not be having viability of running a primary school on sustainable basis, may be considered by the district administration for opening at least a non-formal education centre meant for working children who can not attend the regular primary educational institution.

## ELEMENTARY EDUCATION–MIDDLE LEVEL AND ADULT EDUCATION

6.68 The table below shows the details;

Table No. 6.21  
Status of Middle Level and Adult Education

Sr. No.	Name of the village	Middle School			Adult Education			
		In the village 0 km	Within 5 km	More than 5 km	Within 1 km	Within 2 km	Within 3 km	> 3 km
1	2	9	10	11	11	12	13	14
1.	Simariya Kala (Muhkhed)		1					25
2.	Thunia Ddana (Chhindwara)		3					4
3.	Moadai (Chhindwara)		2					11
	<b>Adopted Village</b>							
4.	Lahgurua (Muhked)	0						20
5.	Omariya (Muhked)		3					19
6.	Munga (Parasiya)		2					12
7.	Baranga (Parasiya)		4					16
8.	Char Gaon Bhat (Chhindwara)		3					8
9.	Dseriya (Chhindwara)		2					6
	<b>Cluster Village</b>							
10	Pipariya Birsa (Chhindwara)		2					10
	<b>Control Village</b>							
	<b>Total</b>	1	9					10

6.69 Though in only one village i.e. Lahgurua [cluster village] the middle school is located within the village periphery, in rest of the 8 number of villages the middle schools are located within an easy distance of 2 to 3 kms which is in line with the laid down criterion for availability of middle school within a radius of 3 kms. Only in village Baranga [cluster village] the middle school is located four kms away from the village which again is not much of a distance from rural view point.

6.70 For most of the villages adult education centres are located far away from the village periphery. Since the percentage literacy of all the ten identified villages is fairly high, the necessity of having such institutions is not felt.

## SECONDARY LEVEL OF EDUCATION–HIGH SCHOOL & HIGHER SCHOOL [+2]

6.71 The policy regarding secondary level of education implies extension of school system in unserved areas consolidating the existing facilities and providing special arrangements for the talented students. In view of the above policy decisions, the following table shows the status of secondary level education in our area of study;

Table No. 6.22  
Status of Secondary Level Education

Sr. No.	Name of the village	High School			Higher School (+2)		
		In the village 0 km	Within 5 km	More than 5 km	In the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)		1			1	
2.	Thunia Ddana (Chhindwara)		3			3	
3.	Moadai (Chhindwara)		2			2	
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)		3			3	
5.	Omariya (Muhked)		3			3	
6.	Munga (Parasiya)		2			2	
7.	Baranga (Parasiya)		4			4	
8.	Char Gaon Bhat (Chhindwara)		3			3	
9.	Dseriya (Chhindwara)		2			2	
	<b>Cluster Village</b>						
10	Pipariya Birsa (Chhindwara)		2			2	
	<b>Control Village</b>						
	<b>Total</b>		10			10	

6.72 A highly satisfactory extent of availability of secondary level of educational infrastructure can be visualized from the above table. For all the ten selected villages covered under the study the facilities of high schools and higher schools [+2] are available within an easy reach of 1 to 3 kms distance. **This is an exceptional situation as normally it has been seen that such institutions are situated at distance of more than 5 kms away from the villages.**

## COLLEGIATE AND TECHNICAL EDUCATION

6.73 The table below shows the details

Table No. 6.23  
Status of Collegiate and Technical Education

Sr. No.	Name of the village	College			Industrial Training Instt.		
		within the village 0 km	within 5 km	more than 5 km	within the village 0 km	within 5 km	more than 5 km
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)			25			25
2.	Thunia Ddana (Chhindwara)			10			10
3.	Moadai (Chhindwara)			10			10
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)			22			22
5.	Omariya (Muhked)			28			28
6.	Munga (Parasiya)			13			12
7.	Baranga (Parasiya)			17			16
8.	Char Gaon Bhat (Chhindwara)			8			8
9.	Dseriya (Chhindwara)			6			8
	<b>Cluster Village</b>						
10	Pipariya Birsa (Chhindwara)			11			10
	<b>Control Village</b>						
	<b>Total</b>			10			10

In non of the villages colleges or Industrial Training Institutes exist which is obvious as such institutions are usually located at tahsil or district headquarters.

## HEALTH

- 6.74 Improvement in health status of population has been one of the thrust areas in the social development programmes of the state of Madhya Pradesh. The ultimate objectivew of the health and family welfare activities of the State is to achieve the goal of “Health for All” as outlined in the National Health Policy which emphasized on implementation of primary health care approach.
- 6.75 In pursuit of this goal, a multitier health and family welfare service delivery system has been established in the State consisting of Sub Health Centres, Primary Health Centres and Community Health Centres. Besides, civil hospitals district hospitals and other special health care institutions have been provided for as a support to three tier system. A mention of the norms accepted for three tier system is given below;
- Sub Health Centre for every 5,000 population in non-tribal areas and 3,000 population in tribal areas.
  - Primary Health Centre for every 30,000 population in non-tribal areas and 20,000 population in tribal areas.
  - Community Health Centre for every 1,20,000 population in non-tribal areas and 80,000 population in tribal areas.
- 6.76 In view of the population criteria for rural health facilities the consideration for location of only Sub Health Centres, Rural Family Welfare Centres etc may be considered. The table below shows the details;

Table No. 6.24  
Rural Health Infrastructure

Sr. No.	Name of the village	Sub Health Centre			Rural Family Welfare Centre		
		Within the Village 0 km	Within 5 km	More than 5 km	Within the Village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)		1			1	
2.	Thunia Ddana (Chhindwara)		3			3	
3.	Moadai (Chhindwara)		3			1	
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)		3		0		
5.	Omariya (Muhked)		3			3	
6.	Munga (Parasiya)		2			2	
7.	Baranga (Parasiya)		4			2	
8.	Char Gaon Bhat (Chhindwara)		3			3	
9.	Dseriya (Chhindwara)		2				0
	<b>Cluster Village</b>						
10	Pipariya Birsa (Chhindwara)		2			2	
	<b>Control Village</b>						
	<b>Total</b>		10		1	8	1

Table No. 6.24 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Government Hospital			Government Dispensary		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	9	10	11	12	13	14
1.	Simariya Kala (Muhkhed)			12			8
2.	Thunia Ddana (Chhindwara)			10		3	
3.	Moadai (Chhindwara)			10		3	
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)			14		3	
5.	Omariya (Muhked)			14			14
6.	Munga (Parasiya)			12		4	
7.	Baranga (Parasiya)			16		4	
8.	Char Gaon Bhat (Chhindwara)			11		3	
9.	Dseriya (Chhindwara)			6		5	
	<b>Cluster Village</b>						
10	Pipariya Birsa (Chhindwara)			10		2	
	<b>Control Village</b>						
	<b>Total</b>			10		8	2

Table No. 6.24 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Private Clinic			Nursing Home		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	15	16	17	18	19	20
1.	Simariya Kala (Muhkhed)		3				25
2.	Thunia Ddana (Chhindwara)		3				10
3.	Moadai (Chhindwara)		3				10
	<b>Adopted Village</b>						
4.	Lahgurua (Muhked)	0					22
5.	Omariya (Muhked)		3				28
6.	Munga (Parasiya)		2		0		
7.	Baranga (Parasiya)		4		0		
8.	Char Gaon Bhat (Chhindwara)		3				11
9.	Dseriya (Chhindwara)	0					6
	<b>Cluster Village</b>						
10	Pipariya Birsa (Chhindwara)		2				11
	<b>Control Village</b>						
	<b>Total</b>	2	8		2		8

6.77 Though non of the villages have **Sub Health Centres** within the village limits but are located within reachable distance, ranging between one to three kms. Similar is the case with rural family welfare centres where with the exception of the village Lahgurua where this facility is available within the village, in rest of 9 villages the facility is located within manageable limits ranging between one to three kms.

6.78 **Government Hospitals** are located quite at far away distance from identified ten number of villages with obvious reasons that such health infrastructures are usually provided at tahsil or district levels serving as referral units for grass root level health services particularly that of Sub Health Centres and Primary Health Centres. **Government Dispensaries** are, ofcourse, available within easy reach of the inhabitants of sample villages which serve as support institution to the three tier system of health infrastructure.

6.79 The institution of Private Clinic is gradually becoming popular in rural areas as is evident from the fact that in our sample area of study two number of villages have private clinics within the village while in eight number of villages the facility is located within an easy distance. **The basic cause of incoming of private practitioners usually not a qualified doctor, is the perpetual absence of medical personnel in rural health institutions that compel the rural population to take resort of the quakes, at least for common diseases.** Even two number of **nursing homes** are located in villages like Munga and Baranga [both cluster villages] with population of 687 and 732 persons respectively that further underlines lack of efficiency in government health institutions prompting the private initiatives to prevail over the health related requirements of rural population. The trend is not bad so long such private practioners are not motivated by the profit at the cost of life of the rural inhabitants.

## FAMILY WELFARE

6.80 Limiting the size of the family is, perhaps, the most important constituent of family welfare as population growth, very rightly said, is the reutralising factor of development. The nation wide campaign of family welfare has undoubtedly made a dent both in urban and rural areas. The table below shows the status of acceptors of family welfare measures in sample villages covered under the study;

Table No. 6.25  
Status of Acceptors of Family Welfare Measurs

Sr. No	Name of the village	Total Workers	Acceptors of Nirodh (No.of Benefic-iaries)	Tubectomy (No. of Benefic-iaries)	Vasectomy (No. of Benefic-iaries)	Loop Insertion (No. of Benefic-iaries)	Oral Pills (No. of Benefic-iaries)	Traditional Methods (No. of Benefic-iaries)
1	2	3	4	5	6	7	8	9
1.	Simariya Kala	348	12 [3.45]	19 [5.46]	1 [0.29]	3[0.86]	11[3.16]	0
2.	Thunia Ddana	606	18 [2.97]	40 [6.60]	2 [0.33]	3[0.50]	16[2.64]	0
3.	Moadai	328	5 [1.52]	8 [2.44]	0	3[0.91]	6 [1.83]	0
	<b>Adopted Village</b>	1282	35 [2.73]	67 [5.23]	3 [0.23]	9[0.70]	33[2.57]	0
4.	Lahgurua	917	12 [1.31]	18 [1.96]	2 [0.22]	3[0.33]	9 [0.98]	0
5.	Omariya	226	8 [3.54]	6 [2.65]	0	2[0.88]	5 [2.21]	0
6.	Munga	350	20 [5.71]	30 [8.57]	3 [0.86]	3[0.86]	25[7.14]	0
7.	Baranga	257	11 [4.28]	17 [6.61]	0	0	13[5.06]	0
8.	Char Gaon Bhat	147	6 [4.08]	3 [2.04]	0	4[2.72]	6 [4.08]	0
9.	Dseriya	305	0	10 [3.28]	0	0	0	0
	<b>Cluster Village</b>	2202	57 [2.59]	84 [3.81]	5 [0.23]	12[0.54]	58[2.63]	0
10	Pipariya Birsa	121	7 [5.79]	6 [4.96]	0	3[2.48]	4 [3.31]	0
	<b>Control Village</b>	121	7[5.79]	6 [4.96]	0	3[2.48]	4 [3.31]	0
	<b>Total</b>	3605	99 [2.75]	157[4.36]	8 [0.22]	24[0.67]	95[2.64]	0

*Note : Figures in brackets show the percentage to the figures of column 3.*

- 6.81 In the above table the percentage figures have been arrived at on the basis of the figures of the workforce which is not very correct. The percentages should have been on the basis of the figures of eligible couples. Since village wise such figures are not available, therefore, as second option the work force figures that include persons within the age group of 15 to 59 years of age have been taken who may be taken as population with reproductive capacity, particularly of males.
- 6.82 Against the total figure of 3605 persons in the work force, the total number of persons adopting various methods of family welfare are 383 which is 10.62 percent to total work force. The performance though not very encouraging but would have presented a better picture had the comparison made with the figures of eligible couples.
- 6.83 The extent of adoption of family welfare measures, in general, is better in adopted villages as compared to both cluster and control villages. In line with prevailing trend, the response to acceptance of Nirodh and Tubectomy is more than the other methods.

## DRINKING WATER

- 6.84 The strategies envisaged for the Tenth Plan mainly centred round the qualitative and quantitative improvement in rural water supply system by raising the level of services from 40 lpd to 55 lpd, reduce the maximum distance of water sources from the present 1.6 km to 0.5 km, providing alternate safe water source where existing sources have been contaminated and potable drinking water to new settlements etc.
- 6.85 Against the back drop of such strategies, the table below shows the existing level of drinking water facilities in the sample villages;

Table No. 6.26  
Status of Drinking Water Facilities

Sl. No.	Name of the Village	Sources of drinking water				
		In the village 0 km	Distance from the village			
			=1 KM	=2 KMS.	=3 KMS.	=4 KMS.
1	2	3	4	5	6	7
	Simariya Kala (Muhkhed)					
1	Thunia Ddana (Chhindwara)	0	-	-	-	-
2	Moadai (Chhindwara)	0	-	-	-	-
3	<b>Adopted Village</b>	0	-	-	-	-
	Lahgurua (Muhked)					
4	Omariya (Muhked)	0	-	-	-	-
5	Munga (Parasiya)	0	-	-	-	-
6	Baranga (Parasiya)	0	-	-	-	-
7	Char Gaon Bhat (Chhindwara)	0	-	-	-	-
8	Dseriya (Chhindwara)	0	-	-	-	-
9	<b>Cluster Village</b>	0	-	-	-	-
	Pipariya Birsa (Chhindwara)					
10	<b>Control Village</b>	0	-	-	-	-
	<b>Total</b>	10	-	-	-	-

6.86 The above table shows that in all the ten number of sample villages one or other drinking water source, mostly hand-pumps, is available within the village which is the result of massive work of installation of hand pumps in rural areas undertaken by the State Government.

6.87 In what follows an attempt has been made to summarise the details of the village particulars.

- A very genuine question may arise as to the necessity of detailed analysis of the existence of facilities both infrastructural and otherwise in identified ten villages when the basic aim of the study is to highlight the impact of the performance of the K.V.Ks. in transferring agriculture related technologies to the farming communities. The answer is simple as the availability of basic facilities in and around the villages are prerequisites for absorption and implementation of any knowledge what-so-ever. Any attempt to transfer knowledge of efficiency to a back of the beyond village may prove fertile because of the constraints of basic facilities that cause negative attitudinal status. But this does not mean that such villages should be left in lurch. Any way this being altogether a different topic is left for the time being.
- In seven number of identified villages viz Moadai, Lahgurua, Omariya Munga, Baranga, Oseria and Pipariya Birsa the percentage of ST population is much more than SC population.
- Even with the preponderance of substantial tribal population the percentage literacy is quite high that ranged between 57.6 percent in village Baranga [cluster village] to 86.6 percent in village Simriya Kalan [adopted village] close to the district percentage literacy level of 66.03 and state percentage literacy level of 64.11.
- The work participation rate is generally high among males than females, except for the village Omeriya [cluster village] where a reverse trend is visible.
- The proportion of marginal workers is usually much lower as compared the proportion of main workers indicating over all lack of additional work opportunities particularly generated by various welfare schemes of the government. The preponderance of female marginal workers over males is visible mainly due to the fact that area of the study is adequated by tribal communities where work culture is equally high among females as well.
- The proportion of non-workers to total population that ranged between 43.9 percent in village Char-Gaon-Bhat [cluster village] to 64.9 percent in village Baranga [cluster village] presents a dismal picture as it shows higher percentage of dependent population.
- Agriculture is the main occupation of the inhabitants of the ten number of identified villages covered under the study as the combined average percentage of cultivators and agriculture labour is 81.3 to total workers. In general, the proportion of cultivators to total workers is more than that of agriculture labour which is positive indication.
- In case of agriculture labour the percentage of female participation, in general, is more than that of males which seems obvious as the villages covered under the study have substantial tribal population.
- The proportion of household workers to total workers is far from being satisfactory that ranged between 0.9 percent in village Omeriya [cluster village] to 4.6 percent in village Munga [cluster village].
- Regarding land use details 85.32 percent area to total geographical area is under gross cropped area that confirms that the main occupation of identified ten villages is agriculture. The percentage of gross irrigated area to gross cropped area is 35.76 which is more than the district and state average figures of 22.51 percent and 28.54 percent respectively.

- All the ten number of villages covered under the study are electrified with irregular power supply situation ranging between 8 hours per day for village Moadai [adopted village] to 14 hours per day for village Lahgurua and Omeriya [both cluster villages]
- The total number of pump-sets energized [electricity] is 482 [as on the date of the survey] which is 0.75 percent to total number of pump sets energized for district Chhindwara that stands at 64584 for the year 1999-2000.
- Existence of total number of 27 number of cooperative societies covering wide range of fields is somewhat remarkable particularly for adopted villages where most of the cooperative societies are located.
- The status of availability of road infrastructure in ten identified villages covered under the study is satisfactory.
- In non of the ten identified villages the facilities regarding regular markets or weekly markets exist but such infrastructures are located within the manageable distance from the ten number of identified villages.
- With the exception of the village Char-Gaon-Bhat where the primary school is located at a distance of 3 kms., in rest of nine number of villages the facility of primary school is available within the village periphery.
- Though in only one village i.e. Lahgurua [cluster village] the middle school is located within the village periphery, in rest of the 8 number of villages the middle schools located within an easy distance of 2 to 3 kms which is in line with laid down criterion of availability of middle school within a radius of 3 kms. Only for village Baranga [cluster village] the middle school is located four kms. away from the village.
- For all the ten selected villages covered under the study the facilities of high schools and higher schools [+] are available within an easy distance of 1 to 3 kms from the village. This is an exceptional situation as normally it has been seen that such institutions are situated at a distance of more than 5 kms away from the village.
- Though non of the villages have Sub Health Centres within the village limits, but are located within reachable distance ranging between one to three kms. Similar is the situation with the location of facility regarding Rural Family Welfare Centres.
- Regarding location of private clinics, two number of villages have this facility within the village limits while in eight number of villages this facility is located within an easy distance. Even two number of Nursing Homes are located in villages Munga and Baranga [coth cluster villages].
- Against the total figure of 3605 persons in the work force, the total number of persons adopting various methods of family welfare are 383 which is 10.62 percent to total work force.
- In all the ten number of sample villages one or other drinking water source, mostly hand pumps are available.

## **Results of Survey**

## **- Household Particulars**

- 6.88 The present part of the chapter deals with the information relating to the households in the following dimensions;
- (i) Macro Dimensions – Wherein information from all the households residing in 10 number of sample villages has been collected.
  - (ii) Micro Dimensions – Wherein 25 percent of the households have been identified for the detailed enquiry.
- 6.89 In what follows an attempt has been made to deal with both the macro and micro dimensions based on the information collected through House Listing Schedule and household Schedule respectively.



## MACRO DIMENSIONS – GENERAL PARTICULARS

6.90 The table below shows the details;

Table No. 6.27  
Household Details

S. No.	Name of the Village	No. of household as on the date of survey	Population Census-2001	Average size of family (based on the figure of col.4)
1	2	3	4	5
1.	Simariya Kala (Muhkhed)	105	733	7
2.	Thunia Ddana (Chhindwara)	143	1335	9
3.	Moadai (Chhindwara)	95	677	7
	<b>Adopted Village</b>	343	2745	8
4.	Lahgurua (Muhked)	104	2288	22
5.	Omariya (Muhked)	45	443	10
6.	Munga (Parasiya)	93	687	7
7.	Baranga (Parasiya)	130	732	6
8.	Char Gaon Bhat (Chhindwara)	55	262	5
9.	Dseriya (Chhindwara)	80	572	7
	<b>Cluster Village</b>	507	4984	10
10	Pipariya Birsa (Chhindwara)	57	300	5
	<b>Control Village</b>	57	300	5
	<b>Total</b>	907	8029	9

6.91 The total number of households as on the date of survey is 907 for all the ten number of villages covered under the study. **The average size of the family comes to 9 persons which is more than the average size of the family of 5 persons.** In village Lahgurua [cluster village] the family size is 22 person which is exceptionally high requiring the special attention of district administration.

## SOCIAL STATUS OF THE HOUSEHOLDS

6.92 The table below shows the details;

Table No. 6.28  
Social Status of the Households.

S. No.	Name of the Village	No. of Household	Caste (Social classification)				Interaction with KVK	
			S.T.	S.C.	O.B.C.	General	Yes	No
1	2	3	4	5	6	7	8	9
1.	Simariya Kala (Muhkhed)	105	1	5	99	0	33	72
2.	Thunia Ddana (Chhindwara)	143	14	6	123	0	20	123
3.	Moadai (Chhindwara)	95	41	13	41	0	38	57
	<b>Adopted Village</b>	343	56	24	263	0	91	252
4.	Lahgurua (Muhked)	104	0	6	98	0	36	68
5.	Omariya (Muhked)	45	23	7	15	0	20	25
6.	Munga (Parasiya)	93	35	30	27	1	9	84
7.	Baranga (Parasiya)	130	108	7	14	1	14	116
8.	Char Gaon Bhat (Chhindwara)	55	21	7	26	1	14	41
9.	Dseriya (Chhindwara)	80	2	37	36	5	25	55
	<b>Cluster Village</b>	507	189	94	216	8	118	389
10	Pipariya Birsa (Chhindwara)	57	18	4	23	12	2	55
	<b>Control Village</b>	57	18	4	23	12	2	55
	<b>Total</b>	907	263	122	502	20	211	696

6.93 The above table shows the preponderance of households from S.T., S.C. and O.B.C. communities that constitute 84.34 percent to total number of 907 households whereas the combined percentage of S.C. and General Communities is 15.66 to total number of households.

### HOUSEHOLDS CLASSIFIED ON THE BASIS OF RELIGION

6.94 The table below shows the details;

Table No. 6.29

#### Distribution of Households on the Basis of Religion

S. No.	Name of the Village	No. of Household	Hindu	Muslim	Sikh	Christian	Nu-Buddh
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)	105	105	0	0	0	0
2.	Thunia Ddana (Chhindwara)	143	143	0	0	0	0
3.	Moadai (Chhindwara)	95	95	0	0	0	0
	<b>Adopted Village</b>	343	343	0	0	0	0
4.	Lahgurua (Muhked)	104	104	0	0	0	0
5.	Omariya (Muhked)	45	45	0	0	0	0
6.	Munga (Parasiya)	93	93	0	0	0	0
7.	Baranga (Parasiya)	130	130	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	55	54	1	0	0	0
9.	Dseriya (Chhindwara)	80	80	0	0	0	0
	<b>Cluster Village</b>	507	506	1	0	0	0
10	Pipariya Birsa (Chhindwara)	57	57	0	0	0	0
	<b>Control Village</b>	57	57	0	0	0	0
	<b>Total</b>	907	906	1	0	0	0

6.95 Against the total number of 907 households, 906 households are the followers of Hindu religion while only one household is the follower of Muslim religion.

### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – MAIN OCCUPATION PRIMARY SECTOR – AGRICULTURE

6.96 The table below shows the details;

Table No. 6.30

#### Household According to their Main Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	105	2	20	66	0
2.	Thunia Ddana (Chhindwara)	143	17	31	87	0
3.	Moadai (Chhindwara)	95	19	34	29	1
	<b>Adopted Village</b>	343	57 [16.62]	85 [24.78]	182 [53.06]	1 [0.29]
4.	Lahgurua (Muhked)	104	27	31	22	1
5.	Omariya (Muhked)	45	27	11	5	0
6.	Munga (Parasiya)	93	29	22	31	5
7.	Baranga (Parasiya)	130	39	39	22	7
8.	Char Gaon Bhat (Chhindwara)	55	15	9	15	7
9.	Dseriya (Chhindwara)	80	58	11	10	0
	<b>Cluster Village</b>	507	195 [38.46]	123 [24.26]	105 [20.71]	20 [3.94]
10	Pipariya Birsa (Chhindwara)	57	24	15	9	3
	<b>Control Village</b>	57	24 [42.11]	15 [26.32]	9 [15.19]	3 [5.26]
	<b>Total</b>	907	276 [30.43]	223 [24.59]	296 [32.64]	24 [2.65]

Note : Figures in brackets show percentage to total number of households.

- 6.98 Out of the total number of 907 households, 819 number of households are engaged directly in agriculture accounting for 90.30 percent to total number of households. Small and other farmers together constitute 56.60 percent to total households that shows viable nature of agriculture being pursued as main source of livelihood. The total number of households in the groups of marginal farmers and agriculture labour are 300 [33.08 percent] which are vulnerable households prone to migrate during lean season of agriculture.
- 6.99 In adopted villages the combined percentage of small and other farmers usually having viable size of land holdings is 77.84, much higher than what is prevailing in cluster and control villages that indicates the rationale of the selection of villages in the adopted group as transfer of agriculture related technology through vocational training, front line demonstration and on farm testing is convenient when the holdings are sizeable. Though there are agriculture related technologies for even smaller holdings covering marginal farmers but generally in rural areas it has been seen that such cultivators are not serious about their farming occupation and resort to other sundry jobs as a stand-by to their main occupation. Obviously the urge to adopt improved agriculture related technology is generally missing among them.
- 6.100 The pursuance of occupations **like minor forest produce collection, live stock, fishing and hunting activities** are completely missing among sample households presenting a negative state of affairs as these occupations are good sources of augmenting household income through alternate sources, thereby reducing extent of under employment among farming communities.

## SECONDARY AND TERTIARY SECTORS

- 6.101 The secondary and tertiary sector occupations, being meaningful destinations that offer work opportunities to absorb the workforce engaged in marginal farming or pursuing the occupation of agriculture labour. The table below shows the details;

Table No. 6.31  
Households According to their Main Occupations – Secondary and Tertiary Sectors

S. No.	Name Of The Village	No. of Household	Secondary Sector		Tertiary Sector	
			Servicing And Repairs	Construction Work	Government Service	Service in Private Sector
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	105	0	0	0	0
2.	Thunia Ddana (Chhindwara)	143	0	0	0	1
3.	Moadai (Chhindwara)	95	0	0	0	5
	<b>Adopted Village</b>	343	0	0	0	6
4.	Lahgurua (Muhked)	104	0	0	2	2
5.	Omariya (Muhked)	45	0	0	2	5
6.	Munga (Parasiya)	93	0	0	0	0
7.	Baranga (Parasiya)	130	0	0	0	8
8.	Char Gaon Bhat (Chhindwara)	55	0	0	0	0
9.	Dseriya (Chhindwara)	80	0	0	0	0
	<b>Cluster Village</b>	507	0	0	4	15
10	Pipariya Birsa (Chhindwara)	57	0	0	0	1
	<b>Control Village</b>	57	0	0	0	1
	<b>Total</b>	907	0	0	4	22

6.102 The situation emerging from the above table is somewhat dismal. The complete absence of **secondary sector** activities among sample households is indicative of the fact the inhabitants of the sample villages have to fall back entirely upon agriculture for earning livelihood which at times compel them to migrate to nearby areas having job opportunities, particularly in lean season of agriculture or in conditions of crop failure. **In tertiary sector** only 26 households are engaged, mainly in private sector, which is hardly meaningful.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – SUBSIDIARY OCCUPATIONS

### PRIMARY SECTOR – AGRICULTURE

6.103 The table below shows the details;

Table No. 6.32  
Households According to their Subsidiary Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	105	0	2	5	30
2.	Thunia Ddana (Chhindwara)	143	0	5	3	67
3.	Moadai (Chhindwara)	95	1	8	3	75
	<b>Adopted Village</b>	343	1 [0.29]	15 [4.37]	11 [3.21]	172 [50.15]
4.	Lahgurua (Muhked)	104	2	12	1	72
5.	Omariya (Muhked)	45	2	15	0	20
6.	Munga (Parasiya)	93	2	17	0	30
7.	Baranga (Parasiya)	130	2	21	0	55
8.	Char Gaon Bhat (Chhindwara)	55	2	22	0	21
9.	Dseriya (Chhindwara)	80	3	24	0	38
	<b>Cluster Village</b>	507	13 [2.56]	111 [21.89]	1 [0.20]	236 [46.55]
10	Pipariya Birsa (Chhindwara)	57	7	24	3	19
	<b>Control Village</b>	57	7 [12.28]	24 [42.11]	3 [5.26]	19
	<b>Total</b>	907	21 [2.32]	150 [16.54]	15 [1.65]	427 [47.08]

Note : Figures in brackets show percentage to total number of households.

6.104 The agriculture as subsidiary occupation is being pursued by 613 number of households which is 67.59 percent to total number of households. **The combined** high percentage of marginal farmers, small farmers and agriculture labour which comes to 65.93 to total of 907 households, pursuing agriculture as subsidiary occupation is understandable as such cultivators usually have to resort to add jobs in nearby places to sustain their livelihoods but the agriculture as subsidiary occupation being pursued by 15 number of other farmers generally having sizable land holdings is somewhat paradoxical. Usually such farmers live in nearby bigger settlements and the cultivation is done by other persons on the basis of certain financial or barter agreements.

### PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

6.105 The table below shows the details;

Table No. 6.33

## Households According to their Subsidiary Occupation – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Produce Collection	Livestock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Simariya Kala (Muhked)	105	0	0	0	0
2.	Thunia Ddana (Chhindwara)	143	0	0	0	0
3.	Moadai (Chhindwara)	95	0	0	0	0
	<b>Adopted Village</b>	343	0	0	0	0
4.	Lahgurua (Muhked)	104	0	0	0	0
5.	Omariya (Muhked)	45	0	0	0	0
6.	Munga (Parasiya)	93	0	0	0	0
7.	Baranga (Parasiya)	130	9	0	0	0
8.	Char Gaon Bhat (Chhindwara)	55	0	0	0	0
9.	Dseriya (Chhindwara)	80	0	0	0	0
	<b>Cluster Village</b>	507	9	0	0	0
10	Pipariya Birsa (Chhindwara)	57	0	0	0	0
	<b>Control Village</b>	57	0	0	0	0
	<b>Total</b>	907	9	0	0	0

6.106 The near absence of activities allied to agriculture is somewhat discouraging as such activities are income additive to household earnings arresting the tendency of migration during the lean season of agriculture.

**SECONDARY AND TERTIARY SECTORS**

6.107 The table below shows the details;

Table No. 6.34

## Households According to their Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of Household	Secondary Sector		Tertiary Sector	
			Servicing and Repairs	Construction Work	Govt. Service	Service in Private Sector
1	2	3	4	5	6	7
1.	Simariya Kala (Muhked)	105	0	0	14	0
2.	Thunia Ddana (Chhindwara)	143	0	0	14	6
3.	Moadai (Chhindwara)	95	0	0	0	4
	<b>Adopted Village</b>	343	0	0	28	10
4.	Lahgurua (Muhked)	104	0	0	7	3
5.	Omariya (Muhked)	45	0	0	0	3
6.	Munga (Parasiya)	93	0	0	8	3
7.	Baranga (Parasiya)	130	1	0	0	12
8.	Char Gaon Bhat (Chhindwara)	55	0	0	5	0
9.	Dseriya (Chhindwara)	80	0	0	3	3
	<b>Cluster Village</b>	507	1	0	23	24
10	Pipariya Birsa (Chhindwara)	57	0	0	0	0
	<b>Control Village</b>	57	0	0	0	0
	<b>Total</b>	907	1	0	51	34

6.108 Households engaged in secondary and tertiary sectors are negligible. Family members from 51 families [5.62 percent] are employed in government service while family members from 34 families are employed in private sector constituting 3.75 percent to total households.

6.109 The overall conclusion that can be drawn from the information relating to occupational distribution of the households is that agriculture is main occupation of the households residing in ten number of identified villages covered under the study.

#### AVERAGE MONTHLY INCOME

6.110 The table below shows the details;

Table No. 6.35  
Average Monthly Income

S. No.	Name of the Village	No. of House hold	Blow Rs.500	Rs.5001 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Simariya Kala (Muhked)	105	0	0	0	0	0	13	92
2.	Thunia Ddana (Chhindwara)	143	1	0	0	0	0	17	125
3.	Moadai (Chhindwara)	95	0	0	0	0	0	9	86
	<b>Adopted Village</b>	343	1	0	0	0	0	39	303
4.	Lahgurua (Muhked)	104	0	0	0	0	0	13	91
5.	Omariya (Muhked)	45	0	0	0	0	0	5	40
6.	Munga (Parasiya)	93	0	0	0	0	0	21	72
7.	Baranga (Parasiya)	130	0	0	0	2	0	20	108
8.	Char Gaon Bhat (Chhindwara)	55	0	0	0	0	0	9	46
9.	Dseriya (Chhindwara)	80	0	0	0	0	0	13	67
	<b>Cluster Village</b>	507	0	0	0	2	0	81	424
10	Pipariya Birsa (Chhindwara)	57	3	0	0	5	0	10	39
	<b>Control Village</b>	57	3	0	0	5	0	10	39
	<b>Total</b>	907	4	0	0	7	0	130	766

6.111 The total number of households in the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is 896 which is 98.79 percent to total number of households that indicate the affluence level of the area. Since 56.60 percent households are within the category of small and other farmers having viable size of land holdings the affluent income levels seem obvious. In adopted villages this percentage is 99.71 while in cluster villages the percentage is 99.61 percent. Even in control village where there is no intervention of K.V.K., the total number of households in the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is 49 accounting for 85.96 percent to total number of 57 households.

## AVERAGE MONTHLY EXPENDITURE

6.112 The table below shows the details;

Table No. 6.36  
Average Monthly Expenditure

S. No.	Name of the Village	No. of Household	Blow Rs.500	Rs.501 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Simariya Kala (Muhked)	105	0	0	0	0	0	1	104
2.	Thunia Ddana (Chhindwara)	143	0	0	0	0	0	8	135
3.	Moadai (Chhindwara)	95	0	0	0	0	0	11	84
	<b>Adopted Village</b>	343	0	0	0	0	0	20	323
4.	Lahgurua (Muhked)	104	0	0	0	0	0	6	98
5.	Omariya (Muhked)	45	0	0	0	0	0	7	38
6.	Munga (Parasiya)	93	0	0	0	0	0	1	92
7.	Baranga (Parasiya)	130	0	0	0	3	0	18	109
8.	Char Gaon Bhat (Chhindwara)	55	0	0	0	0	0	1	54
9.	Dseriya (Chhindwara)	80	0	0	0	0	0	0	80
	<b>Cluster Village</b>	507	0	0	0	3	0	33	471
10	Pipariya Birsa (Chhindwara)	57	3	0	0	3	0	6	45
	<b>Control Village</b>	57	3	0	0	3	0	6	45
	<b>Total</b>	907	3	0	0	6	0	59	839

6.113 In line with income levels, the maximum number of 898 households are within the average monthly expenditure range of Rs. 901.00 to Rs. 1001.00 and above which is 99.01 percent to total number of households with the break-up of cent percent for adopted villages, 99.41 percent for cluster villages and 89.47 percent for control village.

6.114 To **sum up** it may be mentioned that

- **The average size of the family of households residing in the sample area of study is 9 persons which is more than the standard size of the family of 5 persons. In village Lahgurua [cluster village] the average size of the family is 22 persons which is exceptionally high requiring special attention of district administration.**
- **Preponderance of households from S.T. and O.B.C. communities is visible constituting 84.34 percent to total number of 907 households.**
- **The sample area is predominated by followers of Hindu religion that constitute 99.89 percent to total households.**
- **Agriculture is the main stay of the households residing in identified ten numbers of villages as 90.30 percent households as compared to total households are engaged directly in agriculture occupation as prime source of livelihood. Small and other farmers [having sizeable land holding] together constitute 56.60 percent to total household that shows viability of agriculture being pursued as main occupation.**
- **The pursuance of occupations like minor forest produce collection, livestock, fishing and hunting activities are completely missing among sample households.**
- **The complete absence of secondary sector activities among sample households is indicative of the fact that inhabitants of sample villages have to fall back on agriculture for earning livelihood which at times compel them to migrate to nearby areas having job opportunities.**
- **The combined high percentage of marginal farmers, small farmers and agriculture labour which comes to 65.93 to total of 907 households pursuing agriculture as subsidiary occupation is obvious as such cultivators have to resort to odd jobs to sustain their livelihoods.**
- **The near absence of activities allied to agriculture as subsidiary occupation is discouraging as such activities are income additives to household earnings.**
- **Similarly the households engaged in secondary and tertiary sectors as secondary occupations are negligible.**
- **The total number of households in the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is 896 which is 98.79 percent to total number of households indicating the affluence level of the area.**
- **In line with income levels, the maximum number of 898 households are within the average monthly expenditure range of Rs. 901.00 to Rs. 1001.00 and above which is 99.01 percent to total households.**

## **RESULTS OF THE SURVEY – MICRO DIMENSION**

6.115 In the section of write-up, 25 percent of the households have been identified for detailed inquiry. Though the 25 percent of the households of the total of 907 households comes to 226 but we have taken 224 households because of mainly due to their demographic elements. However, a few number plus or minus from the determined parameter is not much meaningful so long it does not vitiate the results of the survey.

## **DEMOGRAPHIC PARTICULARS – MALE –FEMALE DISTRIBUTION**

6.116 The table below shows the details;



Table No. 6.37  
Male – Female Distribution

S. No.	Name of the Village	No. of Families Selected	No. of Family Members	Male Total	Age, Male						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Simariya Kala (Muhkhed)	27	130	76	13	29	13	6	9	5	1
2.	Thunia Ddana (Chhindwara)	35	179	88	25	23	6	19	6	8	1
3.	Moadai (Chhindwara)	22	155	80	14	22	16	11	7	9	1
	<b>Adopted Village</b>	84	467	244	52	74	35	36	22	22	3
4.	Lahgurua (Muhked)	26	158	89	34	19	7	11	11	2	5
5.	Omariya (Muhked)	12	70	32	14	5	5	5	2	1	0
6.	Munga (Parasiya)	22	129	67	13	18	12	12	5	5	2
7.	Baranga (Parasiya)	32	197	95	28	24	8	16	13	2	4
8.	Char Gaon Bhat (Chhindwara)	14	77	36	12	10	3	8	3	0	0
9.	Dseriya (Chhindwara)	20	112	64	23	12	6	13	2	3	5
	<b>Cluster Village</b>	126	743	383	124	88	41	65	36	13	16
10	Pipariya Birsa (Chhindwara)	14	71	36	6	10	6	6	6	0	2
	<b>Control Village</b>	14	71	36	6	10	6	6	6	0	2
	<b>Total</b>	224	1278	663	182	172	82	107	64	35	21

Table No. 6.37 [Contd...]  
Male – Female Distribution

S. No.	Name Of The Village	No. of Families Selected	No. of Family Members	Female Total	Age, Female						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	13	14	15	16	17	18	19	20
1.	Simariya Kala (Muhkhed)	27	130	54	15	11	8	9	8	2	1
2.	Thunia Ddana (Chhindwara)	35	179	91	32	16	15	14	6	5	3
3.	Moadai (Chhindwara)	22	155	75	16	16	14	8	7	11	3
	<b>Adopted Village</b>	84	464	220	63	43	37	31	21	18	7
4.	Lahgurua (Muhked)	26	158	69	15	21	12	9	8	1	3
5.	Omariya (Muhked)	12	70	38	15	8	8	4	2	0	1
6.	Munga (Parasiya)	22	129	62	14	16	11	10	6	1	4
7.	Baranga (Parasiya)	32	197	102	30	28	8	20	7	4	5
8.	Char Gaon Bhat (Chhindwara)	14	77	41	17	10	5	9	0	0	0
9.	Dseriya (Chhindwara)	20	112	48	16	8	11	7	2	3	1
	<b>Cluster Village</b>	126	743	360	107	91	55	59	25	9	14
10	Pipariya Birsa (Chhindwara)	14	71	35	8	10	4	7	4	1	1
	<b>Control Village</b>	14	71	35	8	10	4	7	4	1	1
	<b>Total</b>	224	1278	615	178	144	96	97	50	28	22

6.117 Out of the total number of 1278 family members [which can also be considered as the total population of sample households] the male members are 663, constituting 51.88 percent to total family members, while for females this percentage is 48.12. **The number of males within the population group of 20 to 60 years considered to be the labour force of the area is 288 which is 43.44 percent to total male family members, is representative of the fact that substantial number of males are available for work. In case of females, this percentage is 44.06, again indicating the availability of substantial number of females for producing marketable commodity as usually the females have to do the household work which is not marketable. Similar trend is more or less prevailing among the male-female population of adopted, cluster and control villages. The percentage of dependent population among males in the age group of 0-10 years and 60 years and above is 30.62 to total number of males which is a negative factor since this group of population do not contribute much towards family income. Similarly among females this percentage is 32.52 showing higher extent of dependent population as compared to males. The percentage of dependent population among males in adopted villages is 22.54 and that in cluster villages is 36.55 that leaves a sufficient ground for implementation of latest technology in the area.**

### EDUCATIONAL STATUS OF SAMPLE HOUSEHOLDS

6.118 Literacy and education are the prerequisites for adoption of any technology what-so-ever, requiring mental participation. Therefore, information regarding the educational status of the sample households has been collected to study the impact of literacy/education levels over the acceptability of agriculture related technology. The table below shows the details;

Table No. 6.38  
Educational Status

S. No.	Name Of The Village	No. of Families Selected	No. of Family Members	Illiterate	Literate without going to school	Primary No.	Middle No.
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)	27	130	41	0	49	51
2.	Thunia Ddana (Chhindwara)	35	179	24	6	81	44
3.	Moadai (Chhindwara)	22	155	54	2	47	29
	<b>Adopted Village</b>	84	464	119	8	177	124
4.	Lahgurua (Muhked)	26	158	38	9	44	31
5.	Omariya (Muhked)	12	70	19	2	21	15
6.	Munga (Parasiya)	22	129	20	2	46	41
7.	Baranga (Parasiya)	32	197	53	2	83	38
8.	Char Gaon Bhat (Chhindwara)	14	77	0	1	25	32
9.	Dseriya (Chhindwara)	20	112	10	0	40	24
	<b>Cluster Village</b>	126	743	140	16	259	181
10	Pipariya Birsa (Chhindwara)	14	71	19	5	17	16
	<b>Control Village</b>	14	71	19	5	17	16
	<b>Total</b>	224	1278	278	29	453	321

Table No. 6.38 [Contd...]

## Educational Status

S. No	Name of The Village	No. of Families Selected	No. of Family Members	High School No.	Higher School No.	Graduate No.	Post Graduate No.	Others No.
1	2	3	4	9	10	11	12	13
1.	Simariya Kala (Muhkhed)	27	130	10	0	0	0	0
2.	Thunia Ddana (Chhindwara)	35	179	18	1	0	0	0
3.	Moadai (Chhindwara)	22	155	35	10	3	0	0
	<b>Adopted Village</b>	84	464	63	11	3	0	0
4.	Lahgurua (Muhked)	26	158	22	4	1	0	0
5.	Omariya (Muhked)	12	70	4	3	0	0	0
6.	Munga (Parasiya)	22	129	15	4	2	0	0
7.	Baranga (Parasiya)	32	197	8	3	1	0	0
8.	Char Gaon Bhat (Chhindwara)	14	77	10	0	0	0	0
9.	Dseriya (Chhindwara)	20	112	12	10	4	0	0
	<b>Cluster Village</b>	126	743	71	24	8	0	0
10	Pipariya Birsa (Chhindwara)	14	71	13	2	2	0	0
	<b>Control Village</b>	14	71	13	2	2	0	0
	<b>Total</b>	224	1278	147	37	13	0	0

6.119 The above table shows a total of 278 persons as illiterate which is 21.75 percent to total family members. The extent of illiteracy is within reasonable limit which, ofcourse, is positive indication. The total number of children attending elementary level of education [primary + middle] is 774 accounting for 60.56 percent to total family member is again an encouraging factor indicating proper implementation of the programme of universalisation of Elementary Education in our area of study while number of students attending secondary level of education [high school + higher school (+)] is 184 which is 14.70 percent to total family members – a near satisfactory level. The extent of higher education is not impressive, reason being the lack of higher educational facilities in the area. The overall educational status that emerges proceeds to show the absorption capacity of the people of the sample area to adopt various technologies regarding agriculture communicated particularly by the K.V.K.

### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS–MAIN OCCUPATION

6.120 Out of the total of 1278 family members of sample households 244 persons are engaged in various main occupations that comes to 19.10 percent to total number of persons in identified sample households for detailed enquiry. In what follows an attempt has been made to analyse the information pertaining to main occupation.

### AGRICULTURE OCCUPATIONS

6.121 The table below shows the details;

Table No. 6.39  
Main Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1.	Simariya Kala (Muhkhed)	27	130	0	0	25	0
2.	Thunia Ddana (Chhindwara)	35	179	2	1	34	1
3.	Moadai (Chhindwara)	22	155	5	0	16	0
	<b>Adopted Village</b>	84	464	7	1	75	1
4.	Lahgurua (Muhked)	26	158	3	0	25	0
5.	Omariya (Muhked)	12	70	4	0	8	1
6.	Munga (Parasiya)	22	129	1	0	23	1
7.	Baranga (Parasiya)	32	197	18	0	15	0
8.	Char Gaon Bhat (Chhindwara)	14	77	1	0	12	1
9.	Dseriya (Chhindwara)	20	112	5	0	16	3
	<b>Cluster Village</b>	126	743	32	0	99	6
10	Pipariya Birsa (Chhindwara)	14	71	2	1	11	1
	<b>Control Village</b>	14	71	2	1	11	1
	<b>Total</b>	224	1278	41	2	185	8

6.122 One of the satisfactory trends as depicted by the above table is that the bulk of the farming community is from the category of farmers consisting cultivators [185 number] having sizeable land holdings constituting 14.48 percent to total of 1278 family members and 75.82 percent to total of 244 persons pursuing various main occupations. In case of adopted and cluster villages the percentage of farmers to total family members is 16.16 and 13.32 respectively while as compared to total main workers these percentages are 96.45 and 97.16 respectively. Thus the application of agriculture related technology through K.V.K. in particular and other agencies in general is convenient in adopted and cluster villages.

6.123 The complete absence of **occupations relating to activities allied to agriculture** in our area of study is somewhat discouraging as these activities help in diversification of agriculture, thereby reducing the pressure onland.

## OCCUPATIONS RELATING TO SECONDARY AND TERTIARY SECTORS

6.124 The table below shows the details;

Table No. 6.40  
Main Occupation – Secondary and Tertiary Sectors

S. No	Name of The Village	No. of families selected	No. of family members	Manufacturing of by Product	Servicing and repairs	Construction work	Govt. Service	Service in Pvt. Sector
1.	Simariya Kala (Muhkhed)	27	130	0	1	0	0	0
2.	Thunia Ddana (Chhindwara)	35	179	0	2	0	0	0
3.	Moadai (Chhindwara)	22	155	0	0	0	1	0
	<b>Adopted Village</b>	84	464	0	3	0	1	0
4.	Lahgurua (Muhked)	26	158	0	0	2	0	0
5.	Omariya (Muhked)	12	70	0	0	0	0	0
6.	Munga (Parasiya)	22	129	0	1	0	0	0
7.	Baranga (Parasiya)	32	197	0	0	1	0	0
8.	Char Gaon Bhat (Chhindwara)	14	77	0	0	0	0	0
9.	Dseriya (Chhindwara)	20	112	0	0	0	0	0
	<b>Cluster Village</b>	126	743	0	1	3	0	0
10	Pipariya Birsa (Chhindwara)	14	71	0	0	0	0	0
	<b>Control Village</b>	14	71	0	0	0	0	0
	<b>Total</b>	224	1278	0	4	3	1	0

The employment of only 8 persons in secondary and tertiary sectors is hardly meaningful to avoid the stress on agriculture that ultimately results in population migration during lean season of agriculture.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS IN SUBSIDIARY OCCUPATIONS - AGRICULTURE

6.125 Out of total of 1278 persons from 224 households, 22 number of persons [1.72 percent] are engaged in subsidiary occupations mostly in agricultural activities [16 persons] and secondary sector activities [6 persons].

### SUBSIDIARY OCCUPATION – AGRICULTURE

6.126 The table below shows the details;

able No. 6.41  
Subsidiary Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Simariya Kala (Muhkhed)	27	130	0	0	0	0
2.	Thunia Ddana (Chhindwara)	35	179	0	0	0	2
3.	Moadai (Chhindwara)	22	155	0	0	1	1
	<b>Adopted Village</b>	84	464	0	0	1	3
4.	Lahgurua (Muhked)	26	158	0	0	0	0
5.	Omariya (Muhked)	12	70	0	0	0	2
6.	Munga (Parasiya)	22	129	0	0	0	0
7.	Baranga (Parasiya)	32	197	0	0	0	5
8.	Char Gaon Bhat (Chhindwara)	14	77	0	0	1	2
9.	Dseriya (Chhindwara)	20	112	0	0	0	0
	<b>Cluster Village</b>	126	743	0	0	1	9
10	Pipariya Birsa (Chhindwara)	14	71	1	1	0	0
	<b>Control Village</b>	14	71	1	1	0	0
	<b>Total</b>	224	1278	1	1	2	12

6.127 The above table shows the involvement of only 16 persons mostly as agriculture labour which is 1.25 percent to total number of 1278 family members. The status is hardly meaningful.

6.128 Non of the persons from sample families are involved in occupations **allied to agriculture which** again is a definite gap in performance by sample households.

6.129 Only 6 number of persons are engaged in construction work [secondary sector] which is far from being an encouraging picture.

**6.130 Involvement in subsidiary occupations, particularly activities allied to agriculture and secondary and tertiary sector occupations are highly meaningful for rural economy on the twin grounds of income augmentation and reduction of under employment in agriculture sector which, undoubtedly, is missing in our area of study. One of the basic drawbacks with rural economy is the absence of supportive functions, though the plethora of welfare activities initiated by the government are aimed at creating employment opportunities mainly through subsidiary occupations to ease pressure on**

land. Unfortunately such welfare schemes are yet to show their impact on far flung villages where even the basic awareness about the scheme do not exist, what to say of their implementation. Once the subsidiary employment avenues are created covering the back of the beyond villages, there will not be any looking back as the development will come as a logical outcome of forward linkages covering not only income generating sectors but social sectors like education, health etc.

## AVERAGE MONTHLY INCOME

6.131 The table below shows the details;

Table No. 6.42  
Average Monthly Income

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 & above
1	2	3	4	5	6	7	8	9	10	11
1.	Simariya Kala (Muhked)	27	130	27	0	0	0	0	1	102
2.	Thunia Ddana (Chhindwara)	35	179	36	0	1	0	0	0	142
3.	Moadai (Chhindwara)	22	155	23	0	0	0	0	0	132
	<b>Adopted Village</b>	84	464	86	0	1	0	0	1	376
4.	Lahgurua (Muhked)	26	158	29	0	0	0	0	0	129
5.	Omariya (Muhked)	12	70	12	0	0	0	0	0	58
6.	Munga (Parasiya)	22	129	25	0	0	0	0	0	104
7.	Baranga (Parasiya)	32	197	34	0	0	0	0	0	163
8.	Char Gaon Bhat (Chhindwara)	14	77	14	0	0	0	0	0	63
9.	Dseriya (Chhindwara)	20	112	21	0	0	0	0	2	89
	<b>Cluster Village</b>	126	743	135	0	0	0	0	3	606
10	Pipariya Birsa (Chhindwara)	14	71	13	1	0	1	0	0	56
	<b>Control Village</b>	14	71	13	1	0	1	0	0	56
	<b>Total</b>	224	1278	234	1	1	1	0	3	1038

6.132 The above table shows that 81.22 percent family members are within the average monthly income range of Rs. 1001.00 and above while 18.31 percent family members are within the average monthly income range of Rs. 500.00 and below. This shows that the farmers are pursuing agriculture on fair scale as agriculture is the main occupation of the sample area of our study.

## AVERAGE MONTHLY EXPENDITURE

6.133 The table shows the details;

Table No. 6.43  
Average Monthly Expenditure

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 and Above
1	2	3	4	5	6	7	8	9	10	11
1.	Simariya Kala (Muhkhed)	27	130	25	0	0	0	0	1	104
2.	Thunia Ddana (Chhindwara)	35	179	36	0	0	0	0	0	143
3.	Moadai (Chhindwara)	22	155	21	0	0	0	0	0	134
	<b>Adopted Village</b>	84	464	82	0	0	0	0	1	381
4.	Lahgurua (Muhked)	26	158	27	0	0	0	0	0	131
5.	Omariya (Muhked)	12	70	11	0	0	0	0	0	59
6.	Munga (Parasiya)	22	129	24	0	0	0	0	0	105
7.	Baranga (Parasiya)	32	197	31	0	0	0	0	2	164
8.	Char Gaon Bhat (Chhindwara)	14	77	14	0	0	0	0	0	63
9.	Dseriya (Chhindwara)	20	112	18	0	0	0	1	3	90
	<b>Cluster Village</b>	126	743	125	0	0	0	1	5	612
10	Pipariya Birsa (Chhindwara)	14	71	12	0	0	1	0	0	58
	<b>Control Village</b>	14	71	12	0	0	0	1	0	58
	<b>Total</b>	224	1278	219	0	0	1	1	6	1051

6.134 In line with income trend, 82.24 percent family members are within average monthly expenditure range of Rs. 1001.00 and above.

### 6.135 To sum up

- The percentage of males within the age group of 20 to 60 years, representing the labour force is 43.44 percent to total male family members while that for females the percentage is 44.06 indicating availability of substantial number of persons for performing various economic activities.
- The percentage of dependent population among males in the age group of 0-10 years and 60 years and above is 30.60 to total number of males is a negative factor since this group of population do not contribute much towards family income. Similarly among females this percentage is 35.52 showing higher extent of dependent population.
- The literacy percentage being 78.25 in the sample area is amazingly high that indicates the absorption capacity of the individuals to adopt latest technology regarding agriculture imparted by the K.V.K.
- The bulk of the farming community is from the category of farmers having sizeable land holdings constituting 75.82 percent to total of 244 persons pursuing various main occupations.
- The complete absence of occupations relating to activities allied to agriculture [as main occupation] in our area of study is somewhat discouraging.
- The employment of only 8 persons in secondary and tertiary sectors is hardly meaningful.
- Regarding subsidiary occupations, only 22 number of persons are engaged mostly in agricultural activities [16 person] and secondary sector activities [6 persons].
- Regarding average monthly income, 81.22 percent family members are within the average monthly income range of Rs. 1001.00 and above.
- Similarly regarding expenditure, 82.24 percent family members are within average monthly expenditure range of Rs. 1001.00 and above.

## RESULTS OF SURVEY

### SUBJECTS OF TRAINING RECEIVED– ADOPTED AND CLUSTER VILLAGES

- 6.136 At the outset it is, perhaps, necessary to clarify the point that there are 211 number of families who took part in vocational training, front line demonstration and on farm testing which are three basic mandates of K.V.K. The total responding families from vocational training, front line demonstration and on farm testing will not tally with the figure of 211 as from this basic figure the responding families participated in three fundamental activities. The entire analysis is based upon family approach as normally one member from each family from adopted and cluster villages, where there is direct intervention of K.V.K. takes part in various training programmes. It is evident that in what follows only adopted and cluster villages have been taken into account, i.e. 9 number of villages, excluding one control village where there is no intervention of K.V.K.
- 6.137 Out of the total of 224 households identified for detailed enquiry, 211 families have responded to various training and demonstration initiatives of the K.V.K. constituting 94.20 percent to total identified households, which, no doubt, is an encouraging picture that shows the awareness and intent of the farming community to adopt various technologies related to agriculture. In what follows an attempt has been made to present the item wise details of various initiatives adopted by the K.V.K. in the fields of vocational training, front line demonstration and on farm testing.

### VOCATIONAL TRAINING

- 6.138 The table below shows the details;

Table No. 6.44  
Subjects of Training Received – Vocational Training.

S. No.	Name of Village	No. of Respondent/ families	Subject on Which Training Received			
			Crop Prod Agronomy	Horticulture	Livestock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Simariya Kala (Muhkhed)	26	16	16	0	0
2	Thunia Ddana (Chhindwara)	34	34	21	0	0
3	Moadai (Chhindwara)	23	23	15	4	0
<b>I</b>	<b>Adopted Villages</b>	83	73	52	4	0
4	Lahgurua (Muhked)	26	26	26	0	0
5	Omariya (Muhked)	12	12	12	0	0
6	Munga (Parasiya)	23	23	11	0	0
7	Baranga (Parasiya)	33	33	15	0	0
8	Char Gaon Bhat (Chhindwara)	14	14	14	0	0
9	Dseriya (Chhindwara)	20	20	17	0	0
<b>II</b>	<b>Cluster Villages</b>	128	128	95	0	0
	<b>Total All Villages</b>	211	201	147	4	0



Table No. 6.44 [Contd...]  
Subjects of Training Received – Vocational Training.

S. No.	Name of Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Water Shed Activities
1	2	8	9	10	11	12
1	Simariya Kala (Muhkhed)	0	0	0	2	2
2	Thunia Ddana (Chhindwara)	13	0	3	10	2
3	Moadai (Chhindwara)	0	0	2	5	3
I	<b>Adopted Villages</b>	13	0	5	17	7
4	Lahgurua (Muhked)	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	1	0
6	Munga (Parasiya)	11	0	2	8	0
7	Baranga (Parasiya)	15	0	0	11	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	1	0
II	<b>Cluster Villages</b>	26	0	2	21	0
	<b>Total All Villages</b>	39	0	7	38	7

6.139 The above table shows the extent of major participation in the fields of agronomical and horticultural crops by 201 and 147 household representatively that account for 95.26 percent and 69.67 percent respectively to total of 211 responding families. The trend is more or less common for all the six K.V.Ks. covered under the study which emphatically indicates that rural households still cling to agriculture for earning livelihood and consider their farm as sole savior of their families backed by the years of confidence that they repose in it, despite its vagrant nature. Next to agriculture, comes the subjects like home science wherein 39 household [18.48 percent] and organic farming with 38 households [18.01 percent] have shown their interest. Home science is an area which is gradually picking – up in rural areas as being considered to be good source of subsidiary income mainly generated by women who do jobs like preparation of pickles, papad, bari etc. **The introduction of the concept of self help groups constituted for women have brought startling change in awareness among females who want to contribute for augmentation of family income. This, in stride, to some extent, has brought a degree of empowerment as well. Though the progress is slow, but, given the proper surrounding, the roots will certainly be deepened.** The interest for subject like organic farming is indicative of one basic fact that cultivators of our area of study are serious about the qualitative upgradation of their product that fetches higher returns. **Only marginal number of persons have shown interest** in livestock, dairying and poultry, agro-forestry and watershed activities. The trend is again more or less common among all the six K.V.Ks. covered under the study. **Animal husbandry** considered to be an occupation next to agriculture with potentiality to diversify agriculture is pursued in villages on a very limited scale, mostly for family consumption since regular veterinary services are usually not available in far-flung areas and secondly the absence of ready market due to insufficient road linkages. These twin factors are the basic constraints for the development of activities relating to animal husbandry in rural areas in general and in our area of study in particular which is substantiated by the fact that only 4 number of family representatives [persons] have shown interest in vocational training

relating to livestock, dairying and poultry. **Agro-forestry**, will, perhaps, continue to be on low key so long agriculture is not supported by subsidiary occupation [main aim of most of the welfare schemes initiated by the government is to generate subsidiary occupations in primary, secondary and tertiary sectors which have made no satisfactory impact in rural areas] that reduces pressure on land leaving scope for agro-forestry. Watersheds in nature are community assets where the individual interests are bound to be diversified. Only few cultivator with very large holdings can afford implementing watershed activities of their own. However, such cultivators are not the sole target group of the K.V.Ks., the small and marginal farmers are equally important as they form the bulk of the farming community.

## FRONT LINE DEMONSTRATION [F.L.D.]

6.140 The main objective of the front line demonstration is to demonstrate newly released crop production and protection technologies and its management practices in the farmer's fields. However, in front line demonstrations, the interactions regarding home science activities, training of rural youth and all the other items as specified for vocational training are supposed to be done to educate the farmers for augmentation of income. The table below shows the details;

Table No. 6.45  
Subjects of Training Received – Front Line Demonstration

S. No	Name of The Village	No. of Respondent	Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Simariya Kala (Muhkhed)	5	5	0	0	0
2	Thunia Ddana (Chhindwara)	8	7	1	0	0
3	Moadai (Chhindwara)	3	2	2	0	0
I	<b>Adopted Villages</b>	16	14	3	0	0
4	Lahgurua (Muhked)	4	4	0	0	0
5	Omariya (Muhked)	2	2	0	0	0
6	Munga (Parasiya)	2	1	0	0	0
7	Baranga (Parasiya)	5	3	2	0	0
8	Char Gaon Bhat (Chhindwara)	2	2	0	0	0
9	Dseriya (Chhindwara)	4	4	0	0	0
II	<b>Cluster Villages</b>	19	16	2	0	0
	<b>Total All Villages</b>	35	30	5	0	0

Table No. 6.45 [Contd...]  
Subjects of Training Received – Front Line Demonstration

S. No.	Name of The Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Water Shed Activities
1	2	8	9	10	11	12
1	Simariya Kala (Muhkhed)	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	1	0	0
3	Moadai (Chhindwara)	0	0	0	0	0
I	<b>Adopted Villages</b>	0	0	1	0	0
4	Lahgurua (Muhked)	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0
6	Munga (Parasiya)	0	0	1	0	0
7	Baranga (Parasiya)	0	0	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0
II	<b>Cluster Villages</b>	0	0	1	0	0
	<b>Total All Villages</b>	0	0	2	0	0

6.141 At the outset it may, perhaps, be necessary to clarify the point that a crowded participation in F.L.Ds. is not possible for the reasons that these are organised on selected areas and are constrained by availability of budget.

6.142 The above table shows that out of 211 responding families 35 family representatives [16.59 percent] have responded to various programmes of front line demonstrations which is not much fair as in case of K.V.K. Bhopal the extent of response is 39.31 percent. Here again, like vocational training, the crop production [agronomy] group seems very popular where 30 households [85.71 percent to total of 211 responding households] have shown interest in newly released crop production and protection technologies followed by horticulture where 5 number of households [2.37 percent] showed interest and 2 number of households in agro-forestry [0.95 percent]. A total gap is seen in the fields livestock, dairy, poultry, fisheries, home science, training of rural youth, organic farming and watershed activities where no efforts have been made through F.L.Ds. This again indicates to one point that cultivators are basically interested in enhancing their agriculture related productivity which firstly they understand even without formal education and secondly their clear understanding that once the income from agriculture is enhanced the other activities allied to agriculture will naturally be taken care-of because of secure financial position.

### ON FARM TESTING [O.F.T.]

6.143 In this practice the farmers participate in identifying problems and its priorities and managing experiments and evaluating results. It is, therefore, an adaptive research with farmers perspective. The basic objective of O.F.T. is to identify existing inputs or practices that might help to solve major problems of many farmers in defined study area. The table below shows the details;

Table No. 6.46  
Subjects of Training Received – On Farm Testing

S. No.	Name of The Village	No. of Respondents	Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Simariya Kala (Muhkhed)	3	3	0	0	0
2	Thunia Ddana (Chhindwara)	3	3	0	0	0
3	Moadai (Chhindwara)	2	2	0	0	0
I	<b>Adopted Villages</b>	8	8	0	0	0
4	Lahgurua (Muhked)	1	1	0	0	0
5	Omariya (Muhked)	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0
7	Baranga (Parasiya)	0	0	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0
II	<b>Cluster Villages</b>	1	1	0	0	0
	<b>Total All Villages</b>	9	9	0	0	0

Table No. 6.46 [Contd...]  
Subjects of Training Received – On Farm Testing

S. No.	Name of The Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Watershed Activities
1	2	8	9	10	11	12
1	Simariya Kala (Muhkhed)	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	0	0	0
3	Moadai (Chhindwara)	0	0	0	0	0
I	<b>Adopted Villages</b>	0	0	0	0	0
4	Lahgurua (Muhked)	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0
7	Baranga (Parasiya)	0	0	0	0	0
8	Char Gaon Bhat(Chhindwara)	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0
II	<b>Cluster Villages</b>	0	0	0	0	0
	<b>Total All Villages</b>	0	0	0	0	0

6.144 The above table shows that out of the total of 211 responding households only representatives of 9 households have shown towards organisation of O.F.T., which is 4.27 percent to total responding households. Only on subjects of agronomical produce 9 number of household have got O.F.Ts. organised. In rest of the subjects no interest has been shown by the households for organizing O.F.Ts.

**6.145 The conclusion that can be drawn from above narration is that the efforts of the K.V.K. through vocational training, front line demonstration and on farm testing were concentrated mainly on subjects like agronomy, horticulture and to some extent home science and organic farming wherein the respresentatives from responding households took interest and got vocational training and F.L.Ds. and O.F.Ts. organised. On rest of the subjects like live stock, fisheries, training of rural youth, agro-forestry and watershed activities the interest was either marginal or nil. Therefore the impact of such activities can not be assessed.**

## IMPACT OF K.V.K.

6.146 In the foregoing paragraphs an analysis of subject wise training received has been presented. In what follows an attempt has been made to present the impact of individual items of training in the broad categories of;

- Vocational Training
- Front Line Demonstration
- On Farm Testing

**both before and after training [BT, AT] situations. This is the most important part of the report that clearly indicates the impact of K.V.K's. interventions on agronomy, horticulture, livestock and dairying, fisheries, home science. Watershed activities, agro-forestry etc.**

## VOCATIONAL TRAINING – AGRONOMY - CEREALS

6.147 The table below shows the impact of K.V.K's. intervention over cereal crops;

Table No. 6.47  
Agronomy – Cereals

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Paddy		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Simariya Kala (Muhkhed)	16	3875	4119	0	0	0
2	Thunia Ddana (Chhindwara)	34	3912	4156	1	1800	2500
3	Moadai (Chhindwara)	23	3935	4243	0	0	0
<b>I</b>	<b>Adopted Villages</b>	73			1		
4	Lahgurua (Muhked)	26	3842	4077	3	1810	2900
5	Omariya (Muhked)	12	3867	4208	0	0	0
6	Munga (Parasiya)	23	3265	3587	0	0	0
7	Baranga (Parasiya)	33	3291	3612	0	0	0
8	Char Gaon Bhat (Chhindwara)	14	3664	4193	0	0	0
9	Dseriya (Chhindwara)	20	3665	3935	1	0	190
<b>II</b>	<b>Cluster Villages</b>	128			4		
	<b>Total All Villages</b>	201			5		

Table No. 6.47 [Contd...]  
Agronomy – Cereals

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Maize			Jowar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Simariya Kala (Muhkhed)	16	1944	2256	5	780	980
2	Thunia Ddana (Chhindwara)	27	1756	2078	14	993	1214
3	Moadai (Chhindwara)	15	2147	2427	11	936	1164
I	<b>Adopted Villages</b>	58			30		
4	Lahgurua (Muhked)	26	2315	2604	8	800	1040
5	Omariya (Muhked)	12	2067	2333	4	875	925
6	Munga (Parasiya)	21	1810	2019	12	875	1092
7	Baranga (Parasiya)	17	1900	2206	13	792	1038
8	Char Gaon Bhat (Chhindwara)	12	2400	2767	3	933	1100
9	Dseriya (Chhindwara)	20	1635	1890	14	1164	1321
II	<b>Cluster Villages</b>	108			54		
	<b>Total All Villages</b>	166			84		

- 6.148 Regarding **wheat crop** a total of 201 households have responded to the vocational training which is 95.25 percent to total of 211 responding household. For every village the yield per hectare in after training situation is better than before training condition that ranged between 3587 kg per hectare in village Munga [cluster village] to 4243 kg per-hectare in village Moadai [adopted village]. The yield per hectare of wheat in both before and after training situations is higher than district and state level productivity figures of 2096 kg and 1867 kg respectively **that indicates the positive impact of K.V.Ks. effort.**
- 6.149 As regards paddy crop only 5 number of households [2.37 percent] have responded to vocational training with yield per hectare in A.T. situations, more than of B.T. situations for all the villages covered under the study that ranged between 1900 kg per hectare for village Dseriya [cluster village] to 2900 kg per hectare for village Lahgurua [cluster village], much higher than the district and state level average per hectare yield of 914 kg and 1058 kg respectively. Again the impact of the K.V.Ks. effort is evident.
- 6.150 Regarding maize crop the total responding families are 166 [78.67 percent] which is exceptionally high. Here again the per-hectare yield in after training situations is higher than before training conditions ranging between 1890 kg per hectare for village Dseriya [cluster village] to 2604 kg per hectare for village Lahgurua [cluster village] indicating positive impact. As compared to district and state level productivity of 2949 kg and 2072 kg respectively, the per hectare yield in identified adopted and cluster villages is lower than district average and higher than state average.
- 6.151 Regarding Jowar crop, the total responding families are 84, forming 39.81 percent to total of 211 responding households. For every reporting village the per hectare yield in after training

situation is higher than that of before training conditions which ranged between 925 kg per hectare for village Omariya [cluster village] to 1321 kg per hectare for village Dseriya [cluster village] which are more than the district average productivity of 988 Kg. and less than the state average productivity of 1342 Kg. The impact of the efforts of the K.V.K. is thus obvious.

## VOCATIONAL TRAINING – AGRONOMY – PULSES

6.152 The table below shows the details

Table No. 6.48  
Agronomy – Pulses

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Gram			Arhar			Lentil		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Simariya Kala (Muhked)	11	1530	1820	10	1450	1620	0	0	0
2	Thunia Ddana (Chhindwara)	21	1690	2100	13	1131	1269	1	0	800
3	Moadai (Chhindwara)	15	2120	2510	12	1325	1367	1	0	900
I	<b>Adopted Villages</b>	47			35			2		
4	Lahgurua (Muhked)	12	1720	2050	7	1357	1457	0	0	0
5	Omariya (Muhked)	6	1980	2051	3	967	1133	1	0	800
6	Munga (Parasiya)	12	16800	1880	15	1467	1687	0	0	0
7	Baranga (Parasiya)	22	1990	2080	15	1447	1760	3	601	725
8	Char Gaon Bhat (Chhindwara)	3	1859	2090	2	850	1050	0	0	0
9	Dseriya (Chhindwara)	15	1770	2200	12	1433	1750	3	480	580
II	<b>Cluster Villages</b>	70			54			7		
	<b>Total All Villages</b>	117			89			9		

- 6.153 Gram being an important crop in pulses group the total number of families responding to vocational training are 117 [55.45 percent] with remarkable yield rates in after training conditions as compared to before training situations which ranged between 1820 kg per hectare for village Simriya Kala [adopted village] to 2510 kg per hectare for village Moadai [adopted village] which are higher than both district average productivity of 1344 kg and state average productivity of 932 kg.
- 6.154 Similarly for Arhar crop the responding households are 89 [42.18 percent] with yield rates per hectare higher in after training situations as compared to prevailing rates in before training conditions which ranged between 1050 kg per hectare for village Char-Gaon-Bhat [cluster village] to 1760 kg per hectare for village Baranga [cluster village]. When compared with district average productivity [1679 kg] and state average productivity [825 kg] it has been found that the yield rates prevailing in after training situations for most of the villages covered under the study are higher than district average and for all the villages, higher than the state average.
- 6.155 Lentil being comparatively an unimportant crop of the district, the responding families requiring vocational training are only 9 [4.27 percent] from four number of villages wherein the yield rates in after training situation are more than before training conditions that ranged between 580 kg per hectare for village Dseriya [cluster village] to 900 kg per hectare for village Moadai [adopted village]. These rates are higher than the district average productivity of 434 kg and state average productivity of 506 kg.

#### VOCATIONAL TRAINING – AGRONOMY – OIL SEEDS

- 6.156 The table below shows the details;

Table No. 6.49  
Agronomy – Oil Seeds

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Soybean			Mustard			Linseed		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Simariya Kala (Muhkhed)	12	1950	2260	0	0	0	3	2500	2800
2	Thunia Ddana (Chhindwara)	23	1954	2271	12	1150	1225	2	1600	2300
3	Moadai (Chhindwara)	15	1981	2920	0	0	0	2	1700	1900
I	<b>Adopted Villages</b>	50			12			7		
4	Lahgurua (Muhked)	19	1521	2140	0	0	0	0	0	0
5	Omariya (Muhked)	8	1210	1400	0	0	0	3	2500	2805
6	Munga (Parasiya)	19	1247	1971	5	1060	1220	0	0	0
7	Baranga (Parasiya)	30	1259	2189	9	1689	1791	3	2100	2600
8	Char Gaon Bhat (Chhindwara)	11	1460	1730	0	0	0	2	1800	2300
9	Dseriya (Chhindwara)	17	1245	2125	2	1550	1850	2	2100	2700
II	<b>Cluster Villages</b>	104			16			10		
	<b>Total All Villages</b>	154			28			17		

- 6.157 Soybean being important crop of the district, 154 families against 211 families [72.99 percent] have responded to vocational training programme organised by K.V.K. For every village the after training status is better than before training situations that clearly shows the positive impact of K.V.Ks. effort. In after training situation the productivity ranged between 1971 kg per hectare for village Munga [cluster village] to 2271 kg per hectare for village Thunia Ddna [adopted village] which are higher than the district status of 1464 kg and state average of 1132 kg per hectare.



6.158 Mustard, though is an important cash crop, the response is not very bright as only 28 number of households have responded to the vocational training organised by K.V.K. that comes to 13.27 percent to total of 211 responding households. The productivity in after training situation is better than before training conditions that ranged between 1791 kg per hectare for village Baranga [adopted village] to 1225 kg per hectare for village Thunia Dadna [adopted village], **higher** than district and state average figures of 714 kg and 1009 kg per hectare respectively.

6.159 Similarly for linseed crop only 17 number of households [8.06 percent] have responded to the vocational training programme organised by the K.V.K. The productivity in case of every village is higher in after training situation as compared to before training conditions that ranged between 1900 kg per hectare for village Moadai [adopted village] to 2805 kg. per hectare for village Omariya [cluster village], much higher than the district and state average productivity of 534 kg and 452 kg respectively. The impact of the K.V.Ks. effort is thus obvious.

**6.160 The participation of households for receiving training on crops like cotton and sugarcane is nil as such crops are not grown in the district.**

### VOCATIONAL TRAINING – HORTICULTURE

6.161 Horticulture crops are important from the twin view points of diversification of traditional crop cultivation and employment generation. Being perennial these crops help in checking soil erosion and being tough can be grown on waste land not suitable for traditional crops. The following table shows the details;

Table No. 6.50  
Horticulture Crops

S.No.	Name of The Village	Yield Per- Hectare - Quintal					
		Potato			Onion		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Simariya Kala (Muhkhed)	16	292	307	1	260	276
2	Thunia Ddana (Chhindwara)	21	282	304	1	200	260
3	Moadai (Chhindwara)	15	302	319	2	213	278
I	<b>Adopted Villages</b>	52			4		
4	Lahgurua (Muhked)	25	301	315	1	200	250
5	Omariya (Muhked)	12	273	304	0	0	0
6	Munga (Parasiya)	11	283	302	3	211	235
7	Baranga (Parasiya)	15	292	309	2	209	215
8	Char Gaon Bhat (Chhindwara)	14	294	329	0	0	0
9	Dseriya (Chhindwara)	17	295	315	0	0	0
II	<b>Cluster Villages</b>	94			6		
	<b>Total All Villages</b>	146			10		

Table No. 6.50 [Contd...]  
Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal					
		Tomato			Brinjal		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Simariya Kala (Muhked)	5	202	228	2	125	245
2	Thunia Ddana (Chhindwara)	5	178	188	4	156	271
3	Moadai (Chhindwara)	6	198	213	3	125	255
I	<b>Adopted Villages</b>	16			9		
4	Lahgurua (Muhked)	4	250	268	4	151	246
5	Omariya (Muhked)	2	210	245	0	0	0
6	Munga (Parasiya)	6	212	227	0	0	0
7	Baranga (Parasiya)	7	210	228	3	135	224
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	4	193	225	2	171	239
II	<b>Cluster Villages</b>	23			9		
	<b>Total All Villages</b>	39			18		

Table No. 6.51  
Horticulture Crops

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Chilly			Bhindi			Spices		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	15	16	17	18	19	20	21	22	23
1	Simariya Kala (Muhked)	2	191	233	3	101	146	0	0	0
2	Thunia Ddana (Chhindwara)	2	170	200	2	97	191	3	280	100
3	Moadai (Chhindwara)	3	110	120	2	110	201	0	0	0
I	<b>Adopted Villages</b>	7			7			3		
4	Lahgurua (Muhked)	1	190	230	1	100	150	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0	0	0	0
6	Munga (Parasiya)	4	203	240	1	100	120	0	0	0
7	Baranga (Parasiya)	1	190	200	1	100	120	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0	0	0	0
9	Dseriya (Chhindwara)	2	230	245	0	0	0	1	0	160
II	<b>Cluster Villages</b>	8			3			1		
	<b>Total All Villages</b>	15			10			4		

Table No. 6.51 [Contd...]  
Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal					
		Cucurbits			Papaya		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Simariya Kala (Muhkhed)	0	0	0	1	0	200
2	Thunia Ddana (Chhindwara)	1	0	100	0	0	0
3	Moadai (Chhindwara)	1	0	160	3	0	197
I	<b>Adopted Villages</b>	2			4		
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0	0
7	Baranga (Parasiya)	2	150	165	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0
II	<b>Cluster Villages</b>	2			0		
	<b>Total All Villages</b>	4			4		

Table No. 6.51 [Contd...]  
Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal		
		Citrus		
		No. of Respondents	BT	AT
1	2	9	10	11
1	Simariya Kala (Muhkhed)	2	0	120
2	Thunia Ddana (Chhindwara)	1	140	180
3	Moadai (Chhindwara)	0	0	0
I	<b>Adopted Villages</b>	3		
4	Lahgurua (Muhked)	0	0	0
5	Omariya (Muhked)	0	0	0
6	Munga (Parasiya)	0	0	0
7	Baranga (Parasiya)	2	108	121
8	Char Gaon Bhat (Chhindwara)	0	0	0
9	Dseriya (Chhindwara)	1	140	170
II	<b>Cluster Villages</b>	3		
	<b>Total All Villages</b>	6		

6.162 The cultivation of horticulture crops is popular in district Chhindwara due to climatic support and awareness among cultivators about the value of such crops for income augmentation. In ensuing paragraphs the cropwise analysis has been presented. However, it will not be out of place to mention that since district and state average productivity figures are not available, a comparison has not been made.

6.163 In case of **Potato crop** 146 number of households have responded to the vocational training programme which is **69.19** percent to total of 211 responding families. The per hectare yield has enhanced in every reporting village after receiving the training which ranged between 302 quintal per hectare for village Munga [cluster village] to 329 quintal per hectare for village Char-Gaon-Bhat [cluster village]. The impact of the efforts of the K.V.K. is thus evident.

- 6.164 Regarding **Onion crop** only 10 number of family representatives [3.32 percent] have participated in vocational training resulting in enhanced per hectare yield in after training situation as compared to before training conditions that ranged between 215 quintal per hectare for village Baranga [cluster village] to 278 quintal per hectare for village Moadai [adopted village].
- 6.165 **Tomato** is yet another crop gradually becoming popular as 39 number of households [18.48 percent] have shown interest to have vocational training resulting in enhancement of per hectare yield after participating in training as compared to before training conditions, ranging between 188 quintal per hectare for village Thunia Ddna [adopted village] to 268 quintal per hectare for village Lahgurua [cluster village].
- 6.166 Regarding **Brinjal**, 18 family members [8.53 percent] have taken part in vocational training that resulted in enhanced per hectare yield in after training situation as compared to before training conditions, ranging between 224 quintal per hectare for village Baranga [cluster village] to 271 quintal per hectare for village Thunia Ddna [adopted village].
- 6.167 **Chilly and Bhindi** are the crops wherein 15 and 10 family representatives respectively have responded to vocational training programme that constitute 7.11 percent and 4.74 percent respectively to total of 211 responding families. The per hectare yield in after training situation is much higher as compared to before training conditions that shows the impact of vocational training programme initiated by the K.V.K.
- 6.168 In the group of **Cucerbites, spices, papaya and citrus** the number of families responded are 4,4,4 and 6 respectively which can hardly be termed as encouraging picture. However the yield per hectare in after training situation is better than before training position that vouches for positive impact of vocational training. It seems paradoxical that district being highest producer of orange in the state the response for vocational training regarding citrus crop is only 6 households. It may be mentioned that mostly orange orchard owners are cultivators having large holding with well organised production system having vast knowledge about the crop and well conversed with latest technology. Therefore they seldom feel the necessity of expert knowledge of the K.V.K.

## VOCATIONAL TRAINING – LIVESTOCK AND DAIRY

- 6.169 An important component of agricultural diversification is animal husbandry including dairying and poultry which hold immense potential for improving the rural livelihood conditions by providing additional source of employment and income. Therefore these activities have been particularly included in the mandates of the K.V.K. by providing a post of veterinary scientist. **But it has been seen across Madhya Pradesh** that there is hardly any substantial response from rural households for either having training on the subject of animal husbandry, dairying and poultry or interest in technology transfer through F.L.D. or O.F.T. The basic reasons are lack of technical persons to look after the veterinary and poultry related problems particularly in interior villages resulting in lack of initiatives among rural folk, in general, to take up this activity on reasonably viable scale that may augment their family income. The table below shows the status of veterinary related activities in our area of study;

Table No. 6.52  
Live Stock and Dairying

S. No.	Name of Village						
		Improved Breed (No.)			Milk Production (Liters)		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Simariya Kala (Muhkhed)	0	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	0	0	0	0
3	Moadai (Chhindwara)	2	0	2	4	6	21
I	<b>Adopted Villages</b>	2	0	2	4	6	21
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0	0
7	Baranga (Parasiya)	0	0	0	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0
II	<b>Cluster Villages</b>	0	0	0	0	0	0
	<b>Total All Villages</b>	2	0	2	4	6	21

Table No. 6.52 [Contd...]  
Live Stock and Dairying

S. No	Name of The Village	Artificial insemination			Improved feeding management		
		No. of animals					
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Simariya Kala (Muhkhed)	0	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	0	0	0	0
3	Moadai (Chhindwara)	2	0	2	4	4	0
I	<b>Adopted Villages</b>	2	0	2	4	4	0
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0	0
7	Baranga (Parasiya)	0	0	0	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0
II	<b>Cluster Villages</b>	0	0	0	0	0	0
	<b>Total All Villages</b>	2	0	2	4	4	0

Table No. 6.52 [Contd...]  
Live Stock and Dairying

S. No	Name of The Village	Vaccination No.		
		No. of Respondents	BT	AT
1	2	15	16	17
1	Simariya Kala (Muhkhed)	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	0
3	Moadai (Chhindwara)	2	0	2
I	<b>Adopted Villages</b>	2	0	2
4	Lahgurua (Muhked)	0	0	0
5	Omariya (Muhked)	0	0	0
6	Munga (Parasiya)	0	0	0
7	Baranga (Parasiya)	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0
9	Dseriya (Chhindwara)	0	0	0
II	<b>Cluster Villages</b>	0	0	0
	<b>Total All Villages</b>	2	0	2

- 6.170 Regarding **improved breeding practices** only 2 number of family representatives [0.95 percent] from village Moadai [adopted village] participated in the vocational training with breeding of 2 number of improved animals in after training situation **which shows hardly any impact.**
- 6.171 Similarly for milk production only 4 number of family members from village Moadai [adopted village] have participated in vocational training with 6 liters of milk production in after training situation **which is, rather, insignificant from the impact point of view.**
- 6.172 Regarding **artificial insemination**, only 2 number of family representatives from village Moadai [cluster village] took part in vocational training with 2 number of animals artificially inseminated. **Again the impact is insignificant.**
- 6.173 Regarding **improved feeding management**, one of the important ingredients of animal husbandry functions, only 4 number of families from village Moadai [adopted village] have participated in vocational training **which is far from being satisfactory.**
- 6.174 Similarly for **vaccination**, 2 number of family representatives from village Moadai [adopted village] have participated in vocational training with 2 number of animals vaccinated in after training situation.
- 6.175 Since there is no response from the persons of our sample area to get vocational training on subjects like poultry and fishery development, no vocational training programmes have been organised for such disciplines with the result the impact of the K.V.K. for such activities is nil.**

#### VOCATIONAL TRAINING – HOME SCIENCE

- 6.176 **Home Science activities are getting popular in rural areas as it generates employment opportunities among women.** The initiatives taken by the government in forming self help groups for females have brought awareness to go for supporting activities that ultimately culminates into augmentation of income. The table below shows the details;

Table No. 6.53  
Home Science Activities

S. No.	Name of The Village	Toy Making No.			Pickle Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Simariya Kala (Muhkhed)	0	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	5	0	10	13	47	55
3	Moadai (Chhindwara)	0	0	0	0	0	0
I	<b>Adopted Village</b>	5	0	10	13	47	55
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	11	22	89
7	Baranga (Parasiya)	0	0	0	15	25	83
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0
II	<b>Cluster Village</b>	0	0	0	26	47	172
	<b>Total All Villages</b>	5	0	10	39	94	227

Table No. 6.54 [Contd...]  
Home Science Activities

S. No.	Name of The Village	Jute items No.			Papad/Bari/Jam/Jelly Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Simariya Kala (Muhkhed)	0	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	0	14	5	50
3	Moadai (Chhindwara)	0	0	0	0	0	0
I	<b>Adopted Village</b>	0	0	0	14	5	50
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	9	10	26
7	Baranga (Parasiya)	2	0	3	8	8	8
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0
II	<b>Cluster Village</b>	2	0	3	17	18	34
	<b>Total All Villages</b>	2	0	3	31	23	84

- 6.177 Ever since the plastic toys have come in the rural markets, the indigenous art of making clay toys is getting extinct as is evident from the fact that only 5 number of family representatives have participated in vocational training organised for toy making from the village Thunia Ddana [adopted village] which is 2.37 percent to total of 211 responding families with 10 number of toys made in after training conditions which is hardly an impact worth mentioning.
- 6.178 Preparation of pickles is an item getting popular in rural areas as the skill is already there. Out of 211 responding families, 39 households [18.48 percent] have responded to the vocational training with preparation of 227 kg of pickles after getting the training as compared to 94 kgs in before training conditions. The impact of the intervention of K.V.K. is, thus, visible.
- 6.179 For making jute items only 2 number of households from village Baranga [cluster village] have participated in the training programme resulting in making of 3 number of items after getting the training. The impact is intangible.

6.180 Regarding preparation of papad/bari/jam/jelly, 31 family representatives [14.69 percent] have participated in vocational training with preparation of 84 kgs of such items in after training conditions as compared to 23 kgs in before training situations. This is one of the home science activities which have immense scope in rural areas. **The government interventions through various target oriented programmes of Rural development department may yield startling results.**

6.181 **No vocational training regarding training of rural youth has been organised.** It may be mentioned that TRYSEM is one of the massive schemes of the government aimed at training of rural youth for self employment. With such scheme in vogue, it is always doubtful whether the rural youth will be participating in any such training organised by K.V.K., specially when there is no gurantee of placement.

### VOCATIONAL TRAINING – AGRO FORESTRY

6.182 Agro forestry is the concept of eightees which gurantees farm income, covers the risk of crop failure, improves the soil fertility, its structure and texture and checks the soil erosion. The table below shows the details;

Table No. 6.55  
Agro Forestry – On Farm Plantation

S.No.	Name of The Village	On farm plantation Hectare		
		No. of Respondents	BT	AT
1	2	3	4	5
1	Simariya Kala (Muhked)	0	0	0
2	Thunia Ddana (Chhindwara)	4	0	3
3	Moadai (Chhindwara)	2	0	2
I	<b>Adopted Village</b>	6	0	5
4	Lahgurua (Muhked)	0	0	0
5	Omariya (Muhked)	0	0	0
6	Munga (Parasiya)	1	0	0
7	Baranga (Parasiya)	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0
9	Dseriya (Chhindwara)	0	0	0
II	<b>Cluster Village</b>	1	0	0
	<b>Total All Villages</b>	7	0	5

6.183 Out of the total of 211 responding families only 7 number of households from 3 villages have responded to the vocational training programme pertaining to agro-forestry with area coverage of 5 hectares after receiving training as compared to nil area coverage in before training situation. Though the achievement is limited, more efforts are required to enhance the area under agro-forestry as the concept has immense potential.

### VOCATIONAL TRAINING – ORGANIC FARMING

6.184 Organic farming though is a practice usually followed by big cultivators or government farms, but in our area of study 38 number of family representatives have participated in the vocational training organised on various aspects of organic farming. The table below shows the details;



Table No. 6.56  
Organic Farming

S. No.	Name of The Village	Compost by NADEP method Nos.			Bio fertilizer, Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Simariya Kala (Muhkhed)	2	0	2	1	0	125
2	Thunia Ddana(Chhindwara)	5	0	11	10	0	405
3	Moadai (Chhindwara)	2	0	4	3	0	350
I	<b>Adopted Village</b>	9	0	17	14	0	880
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	4	0	170
6	Munga (Parasiya)	5	1	5	8	0	2450
7	Baranga (Parasiya)	2	0	2	14	50	1650
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	1	0	4	0	0	0
II	<b>Cluster Village</b>	8	1	11	24	50	4270
	<b>Total All Villages</b>	17	1	28	38	50	5150

Table No. 6.57 [Contd...]  
Organic Farming

S.No.	Name of the Village	Bio-pesticide Liter		
		No. of Respondents	BT	AT
1	2	9	10	11
1	Simariya Kala (Muhkhed)	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	0
3	Moadai (Chhindwara)	0	0	0
I	<b>Adopted Village</b>	0	0	0
4	Lahgurua (Muhked)	0	0	0
5	Omariya (Muhked)	0	0	0
6	Munga (Parasiya)	5	70	400
7	Baranga (Parasiya)	3	0	150
8	Char Gaon Bhat (Chhindwara)	0	0	0
9	Dseriya (Chhindwara)	0	0	0
II	<b>Cluster Village</b>	8	70	550
	<b>Total All Villages</b>	8	70	550

- 6.185 Regarding **preparation of compost** by NADEP method, 17 number of households [8.06 percent] have responded to the training programme resulting in construction of 28 NADEP pits in after training situation as compared to only construction of one number of pit in before training condition. The impact of the K.V.K. is obvious.
- 6.186 Regarding **bio-fertilizer**, 38 number of households [18.01 percent] have participated in the vocational training with production of 5150 kg of bio-fertiliser in after training situation as compared to 50 kgs of bio-fertiliser production in before training situation. The impact of the K.V.Ks. efforts are clearly visible.
- 6.187 **As regards bio-pesticide**, 8 number of households [3.79 percent] have responded to the training programme resulting in production of 550 liters of bio-pesticide in after training situation as compared to 70 liters in before training conditions, which again is a leap forward performance due to various efforts of K.V.K.

**6.188 Regarding watershed activities no training programmes have been organised.**

**6.189 In the following paragraphs an attempt has been made to sum-up the efforts of vocational training imparted by the K.V.K.**

- Regarding the yield per hectare both for agronomical and horticultural crops the after training status as compared to before training conditions are better that clearly shows the positive impact of vocational training imparted by the K.V.K.
- In case of wheat crop where the response is 95.25 percent to total of 211 responding households, the per hectare yield in after training situation is more than the district and state level productivity.
- For paddy the response level is only 2.37 percent with per hectare yield much higher than district and state level yields per hectare in after training situation.
- The response level in case of Maize crop is 78.67 percent to total of 211 responding families with per hectare yield more than the district level average productivity and more than the state level per hectare yield in after training situation.
- Similarly regarding Jowar crop the productivity is more than the district average productivity and less than per hectare yield as reported at state level in after training situation.
- For Gram the percentage of responding family is 55.45 with higher productivity as compared to what has been reported for district and state levels in after training situation.
- Similarly for Arhar crop the extent of response is 42.18 percent to total of 211 responding families with yield rates higher than district and state average productivity in after training situation.
- Lentil being comparatively an unimportant crop of the district, only 4.27 percent households have responded to the vocational training with higher yield rates as compared to both district and state level productivity in after training situation.
- Regarding soybean 72.99 percent households have responded to the training programme with yield rates in after training situation higher than district and state level average productivity.
- In case of Mustard 13.27 percent households have responded to the training programme with yield rates higher than both district and state level average productivity.
- Similarly for linseed the productivity level in after training situation is higher than the average productivity at district and state levels.
- The important horticultural crops of the district are potato, tomato and brinjal wherein 69.19 percent, 18.48 percent and 8.53 percent family representatives have responded to the vocational training. In these crops the after training performance are better than before training situations. An intensive effort is perhaps required to persuade the cultivators to take up the cultivation of horticulture crops on affordable scale.
- The participation rate of villagers in the training courses related to livestock and dairying is hardly meaningful which requires intensive efforts to popularize such activities.
- For home science the important constituents are preparation of pickles, papad/bari/jam/jelly etc which have immense scope in our area of study.
- In case of agro-forestry though only 7 number of households have shown interest in the training programme, the activity can pick-up with more intensive efforts.
- The activities like organic farming and bio pesticides are getting popular in our area of study as 18.01 percent and 3.79 percent households respectively have shown interest in such activities.

- **No vocational trainings have been organised for subjects like poultry, fishery, training of rural youth and watershed activities. It may be mentioned have that the main reasons of not organizing such trainings are mainly the apathy of the target group. However the lack of interest on behalf of K.V.K. may not be ruled-out altogether.**

#### FRONT LINE DEMONSTRATION [F.L.D.]

6.190 Front line demonstrations [FLD] are organized on farmer's field with the result the response is bound to be low as compared to vocational training. The table below shows the impact of front line demonstrations on cereal crops.

Table No. 6.58  
Agronomy – Cereals

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Maize		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	2	3850	4300	1	1900	2500
2	Thunia Ddana (Chhindwara)	3	4067	4333	1	2000	2500
3	Moadai (Chhindwara)	1	4000	4500	0	0	0
I	<b>Adopted Village</b>	6			2		
4	Lahgurua (Muhked)	2	3850	4150	1	2400	2900
5	Omariya (Muhked)	1	3900	4500	1	2600	2800
6	Munga (Parasiya)	1	2700	3000	0	0	0
7	Baranga (Parasiya)	2	2950	3600	0	0	0
8	Char Gaon Bhat (Chhindwara)	1	3600	4000	1	2600	2800
9	Dseriya (Chhindwara)	2	3700	4000	0	0	0
II	<b>Cluster Village</b>	9			3		
	<b>Total All Villages</b>	15			5		

- 6.191 The front line demonstrations for the **wheat crop** have been organized on the fields of 15 cultivating households which is 7.11 percent to total of 211 responding families. The yield per-hectare in after training situation is higher than before training situation for every village that ranged between 3000 kg. per hectare for the village Munga [cluster village] to 4500 kg per hectare for village Moadai [adopted village] and Omariya [cluster village] which is far in excess of district and state average productivity of 2096 kg and 1867 kg respectively.
- 6.192 Regarding **Maize crop** only 5 number [2.37 percent] of demonstrations have been organised with yield per hectare higher in after training situations as compared to before training conditions that ranged between 2500 kg per hectare for villages Simariya Kala and Thunia Ddana [both adopted villages] to 2900 kg per hectare for village Lahgurua which are lower than the district average productivity of 2949 kg and higher than state average productivity of 2072 kg.
- 6.193 No F.L.Ds. have been organised for paddy and Jowar. Paddy being unimportant crop of district Chhindwara, the low response seems obvious **but Jowar, for which response regarding vocational training is substantiation, a few F.L.Ds. should have been organised for this crop specially when this crop is grown mostly by marginal and small farmers.**

#### AGRONOMY - PULSES

6.194 The table below shows the details;

Table No. 6.59  
Agronomy – Pulses

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Gram			Arhar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	1	1400	1700	0	0	0
2	Thunia Ddana (Chhindwara)	1	1400	1800	1	1600	1800
3	Moadai (Chhindwara)	0	0	0	0	0	0
I	<b>Adopted Village</b>	2			1		
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0	0
7	Baranga (Parasiya)	0	0	0	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	1	1300	1500	0	0	0
II	<b>Cluster Village</b>	1			0		
	<b>Total All Villages</b>	3			1		

6.195 **Gram**, though an important crop of district Chhindwara, only 3 number of F.L.Ds. have been organised which is 1.42 percent to total of 211 responding families with better performance in after training situations as compared to before training conditions, which ranged between 1500 kg per hectare for village Dseriya [cluster village] to 1800 kg per hectare for village Thunia Ddana [adopted village] much higher than district and state average productivity of 1344 kg and 932 kg respectively.

6.196 Similarly for **Arhar** only one F.L.D. has been organised at village Thunia Ddana despite substantial response for vocational training, with productivity of 1800 kg per hectare in after training situation, higher than both in before training conditions and average district productivity of 1679 kg and state average productivity of 825 kg.

## AGRONOMY – OIL SEEDS

6.197 The table below shows the details;

Table No. 6.60  
Agronomy – Oil Seeds

Sl. No.	Name of the Village	Soybean, Yield Per- Hectare - Kg.		
		No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	1	2000	2200
2	Thunia Ddana (Chhindwara)	1	1500	1900
3	Moadai (Chhindwara)	1	1900	2400
I	<b>Adopted Village</b>	3		
4	Lahgurua (Muhked)	1	1400	1904
5	Omariya (Muhked)	0	0	0
6	Munga (Parasiya)	0	0	0
7	Baranga (Parasiya)	1	1600	2000
8	Char Gaon Bhat (Chhindwara)	0	0	0
9	Dseriya (Chhindwara)	1	2100	2300
II	<b>Cluster Village</b>	3		
	<b>Total All Villages</b>	6		

6.198 Soybean though an important crop of the district, only 6 number of F.L.Ds. have been organised which is 2.84 percent to total of 211 responding households with per hectare yield higher in after training situation as compared to before training conditions that ranged between 1900 kg per hectare for village Thunia Ddana [adopted village] to 2400 kg per hectare for village Moadai [adopted village] which are higher than the district and state average productivities of 1464 kg and 1132 kg respectively.

6.199 No FLDs have been organized for crops like Paddy, Lentil, Jowar, Mustard, Cotton, Sugarcane and Linseed. The impact of F.L.D. for these crops will not be visible.

## HORTICULTURE

6.200 The table below shows the details;

Table No. 6.61  
Horticulture Crops

S. No	Name of The Village	Yield Per Hectare - Kg.								
		Potato			Tomato			Brinjal		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	0	0	0	0	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	1	300	320	0	0	0	0	0	0
3	Moadai (Chhindwara)	0	0	0	1	190	220	0	0	0
I	<b>Adopted Village</b>	1			1			0		
4	Lahgurua (Muhked)	0	0	0	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0	0	0	0	0
7	Baranga (Parasiya)	0	0	0	1	200	260	1	240	280
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0	0	0	0
II	<b>Cluster Village</b>	0			1			1		
	<b>Total All Villages</b>	1			2			1		

Table No. 6.61 [Contd...]  
Horticulture Crops

S. No	Name of The Village	Yield Per Hectare - Kg.					
		Chilli			Papaya		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	0	0	0	0	0	0
2	Thunia Ddana (Chhindwara)	0	0	0	0	0	0
3	Moadai (Chhindwara)	0	0	0	1	0	200
I	<b>Adopted Village</b>	0	0	0	1		
4	Lahgurua (Muhked)	0	0	0	0	0	0
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0	0
7	Baranga (Parasiya)	1	0	260	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0
II	<b>Cluster Village</b>	1	0		0		
	<b>Total All Villages</b>	1	0		1	0	200

- 6.201 **Potato**, though an important horticulture crop of district Chhindwara with 146 responding families for vocational training, only one F.L.D. has been organised for Thunia Ddana [adopted village] with yield per hectare higher in after training situation as compared to before training conditions. **There should be some extent of matching performance between vocational training and F.L.D. to keep up the tempo of transferring agriculture related technology to the field.**
- 6.202 Regarding **Tomato** also, only two number of F.L.Ds. have been organised [even though the crop is important with ready market] at villages Moadai [adopted village] and Baranga [cluster village] with better performance in after training situation as compared to before training conditions.
- 6.203 Similarly for **Brinjal crop** only one F.L.D. has been organised for village Baranga [cluster village] with higher yield per hectare in after training situation as compared to before training conditions.
- 6.204 As regards **Chilly and Papaya crops** only on F.L.D. each has been organised for villages Baranga [cluster village] and Moadai [adoted village] respectively with not much tangible results.

## AGRO FORESTRY

- 6.205 The table below shows the details;

Table No. 6.62  
Agro Forestry

S.No.	Name of The Village	On farm plantation Hectare		
		No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	0	0	0
2	Thunia Ddana (Chhindwara)	1	0	1
3	Moadai (Chhindwara)	0	0	0
I	<b>Adopted Village</b>	1	0	1
4	Lahgurua (Muhked)	0	0	0
5	Omariya (Muhked)	0	0	0
6	Munga (Parasiya)	1	0	0
7	Baranga (Parasiya)	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0
9	Dseriya (Chhindwara)	0	0	0
II	<b>Cluster Village</b>	1	0	0
	<b>Total All Villages</b>	2	0	1

The above table shows an insignificant performance as only 2 F.L.Ds. have been organised in villages Thuniya Ddana [adopted village] and Munga [cluster village] with only 1 hectare of on farm plantation.

- 6.206 Regarding subjects like livestock and dairying, poultry, fisheries development, organic farming and watershed activities no F.L.Ds. have been organised with the result the impact of these activities through F.L.Ds. will not be visible. Since all these activities are important for rural economy, particularly the subjects like livestock, dairying and watershed activities, a few F.L.Ds. may be organised on such subjects.

## 6.207 To sum-up

- **Front Line Demonstrations organised in our area of study has lead to enhancement in productivity of most of agronomical and horticultural crops in after training situations as compared to before training conditions which show the positive impact of the efforts of the K.V.Ks.**
- **The F.L.Ds. for wheat crop has been organised on the fields of 15 number of cultivating households that lead to productivity in excess of average productivity prevailing at district and state levels.**
- **Regarding Maize crop, 5 number of F.L.Ds. have been organised with yield per hectare lower than district average and more than state level average productivity.**
- **As regards gram, only 3 number of F.L.Ds. have been organised with yield rates much higher as compared to district and state level average productivity.**
- **Similarly for Arhar, only one F.L.Ds. has been organised with productivity higher than prevailing yield rates at district and state levels.**
- **Regarding Soybean, 3 number of F.L.Ds. have been organised with higher yield per hectare as compared to district and state levels average productivities.**
- **Regarding horticulture crops like potato, tomato, brinjal, chilly and papaya crops, very marginal numbers of F.L.Ds. have been organised with very little tangible results.**
- **Similarly regarding agro forestry, F.L.Ds. for on farm plantation have been organised for two number of cultivators with not much tangible result.**
- **No F.L.Ds. have been organised on subjects like livestock and dairying, poultry, fisheries development, organic farming and watershed activities, the impact of such activities through F.L.D. will not be visible.**
- **Since F.L.Ds. are measures of learning by doing, more extensive implementation of this mandate must be attempted, matching to vocational training. What is required is to plan the F.L.Ds. much in advance in consultation with district authorities of line departments like agriculture, horticulture and Chief Executive Officer of Zila Panchayat etc. so that an understanding of State Plan priorities are reflected over such advance planning. The vocational training may thus be organised to provide a basic class room knowledge regarding subjects on which F.L.Ds. are to be organised so that farmers are equipped with ready knowledge. After this step, the F.L.Ds. may be organised which will immensely help the cultivators to implement the technology.**

## ON FARM TESTING [OFT] - CEREALS

6.208 In case of On Farm Testing, recommended technologies are tested on farmer's fields leading to the solution of various farming problems. The extent of response will obviously be low as the new technologies are not very frequent.

6.209 The table below shows the details;

Table No. 6.63  
Cereal Crops

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Maize		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	2	3850	4400	0	0	0
2	Thunia Ddana (Chhindwara)	3	4067	4467	0	0	0
3	Moadai (Chhindwara)	1	4000	4500	0	0	0
I	<b>Adopted Village</b>	6			0		
4	Lahgurua (Muhked)	0	0	0	1	2400	2900
5	Omariya (Muhked)	0	0	0	0	0	0
6	Munga (Parasiya)	0	0	0	0	0	0
7	Baranga (Parasiya)	0	0	0	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0
9	Dseriya (Chhindwara)	0	0	0	0	0	0
II	<b>Cluster Village</b>	0			1		
	<b>Total All Villages</b>	6			1		

6.210 In case of **Wheat**, 6 number of on farm testing have been organised [all in adopted villages] with yield per hectare higher in after training situation as compared to before training conditions that ranged between 4400 kg per hectare in village Simariya Kala [adopted village] to 4500 kg per-hectare in village Moadai [adopted village] which are much higher than the district and state average productivities of 2096 kg and 1867 kg respectively.

6.211 Regarding Maize, only one O.F.T. has been organised in village Lahgurua [cluster village] with yield per hectare lower than average district level productivity of 2949 kg and more than state level average productivity of 2072 kg.

#### ON FARM TESTING – OIL SEED CROPS

6.212 The table below shows the details;

Table No. 6.64  
Oil Seed Crop - Soybean

S. No.	Name of The Village	Soyabeen		
		No. of Respondents	BT	AT
1	Simariya Kala (Muhkhed)	1	2000	2200
2	Thunia Ddana (Chhindwara)	0	0	0
3	Moadai (Chhindwara)	1	1900	2400
I	<b>Adopted Village</b>	2		
4	Lahgurua (Muhked)	0	0	0
5	Omariya (Muhked)	0	0	0
6	Munga (Parasiya)	0	0	0
7	Baranga (Parasiya)	0	0	0
8	Char Gaon Bhat (Chhindwara)	0	0	0
9	Dseriya (Chhindwara)	0	0	0
II	<b>Cluster Village</b>	0		
	<b>Total All Villages</b>	2		



6.213 Regarding Soybean only 2 number of O.F.Ts. have been organised in villages Simariya Kala and Moadai [both adopted villages] with higher yield rates as compared to district and state level average productivities of 1464 kg and 1132 kg respectively in after training situations.

**6.214 No O.F.Ts. have been organised on subjects like horticulture, livestock and dairying, poultry, fishery development, home science, training of rural youth, agro-forestry organic farming and watershed activities, which are very relevant to rural economy. The impact of such activities through O.F.Ts. therefore, will not be visible.**

**6.215 In the following paragraphs summing-up efforts have been made regarding results of O.F.T.**

- **In case of O.F.T., the yield per-hectare in after training situation is more than before training conditions as has happened for both vocational training and front line demonstrations which shows the positive impact of K.V.Ks. efforts.**
- **The overall performance regarding organizing O.F.Ts. is somewhat sketchy as is evident from that fact that on very important subjects like horticulture, livestock and dairying, poultry, fishery development, agro-forestry and watershed activities, no O.F.Ts. have been organised. Whatever O.F.Ts. have been arranged are mostly limited to adopted villages, disregarding cluster villages which are the main forward linkages for adoption of agriculture related technology. Also there is complete mismatch between extent of organizing vocational training and O.F.T. As said earlier there should be definite chain of action between three basic mandates, i.e. vocational training, F.L.D. and O.F.T. with sequential results of impact of new or prevailing technologies.**

#### **STATUS OF ACTIVITIES IN CONTROL VILLAGE – PIPARIYA BIRSA**

6.216 The study has identified one control village, i.e., Pipariya Birsa with 14 number of households and 71 sample family members, where there is no intervention of K.V.K. The information regarding common items of agronomical and horticulture crops have been collected to show the comparative status in areas of intervention and non-intervention. However, in case of control village before and after training situations have not been shown as there is no effort of K.V.K. in this village. For comparison, the average performance of vocational training in after training situation for adopted and cluster villages have been taken as the participation regarding all subjects is maximum in case of vocational training. The table below shows the comparative status of control village on one side and adopted and cluster villages on other side.

Table No. 6.65

## Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3850	4014	(+) 164
2	Paddy	2200	2433	(+) 233
3	Maize	2264	2287	(+) 23
4	Jowar	1045	1097	(+) 52
<b>PULSES</b>				
5	Gram	1500	2087	(+) 587
6	Arhar	1200	1455	(+) 255
7	Lentil	750	761	(+) 11
<b>OIL SEEDS</b>				
8	Soybean	1569	2198	(+) 629
9	Mustard	1000	1521	(+) 521
10	Linseed	1000	2486	(+) 1486
<b>HORTICULTURE CROPS – QUINTAL</b>				
11	Potato	287	316	(+) 25
12	Onion	203	252	(+) 49
13	Tomato	219	228	(+) 9
14	Brinjal	240	247	(+) 7
15	Chilly	176	183	(+) 7
16	Bhindi	100	155	(+) 5
17	Cucurbits	-	142	-
18	Spices	100	130	(+) 30
19	Papaya	120	198	(+) 78
20	Citrus	-	148	-

6.217 The above table shows that except for the crops like wheat, paddy, gram, arhar, soybean, mustard and linseed where the per-hectare yield for adopted and cluster villages is substantially high as compared to that prevailing in control village, for rest of the crops the difference in per hectare yield is not much between adopted/cluster villages on one side and the control village on the other side. This shows that district as whole has conducive conditions for agricultural activities.

6.218 In the field of home science activities, particularly regarding preparation of pickles and papad/bari/jam/jelly etc. substantial work has been done in adopted and cluster villages through the efforts of K.V.K. whereas such activities are not very popular in control village.

**6.219 Like vocational training programme no work has been done in control village on activities like poultry farming, fishery development, training of rural youth, watershed activities which have substantial scope in a rural economy.**

## RESULTS OF SURVEY – INDIVIDUAL PARTICULARS ADOPTED AND CLUSTER VILLAGES

6.220 In the following paragraphs an attempt has been made to highlight the various reactions of 25 percent of individuals. The total number of sample family members as reported is 1278 for adopted, cluster and control villages, the 25 percent of which comes to 319 individuals. The following table gives the break-up;

Table No. 6.66  
Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	464	116
2	Cluster Villages	743	185
3	Control Village	71	18
	<b>Total</b>	<b>1278</b>	<b>319</b>

6.221 In the following paragraphs an attempt has been made to highlight the individual reactions in **adopted and cluster villages**, i.e. for 301 **individuals**.

6.222 The criteria for selection of individuals are as follows;

- The individual should be the adult member of the family.
- He should be associated with any programme of K.V.K. For individuals of control village, this criterion is not applicable for control village.
- He/She should be literate, may be without having any formal education.

### SOCIAL CLASSIFICATION OF INDIVIDUALS

6.223 The table below shows the details;

Table No. 6.67  
Social Classification

S. No.	Name of the Village	No. of Individual	Social classification			
			S.T.	S.C.	O.B.C.	GENERAL
1	2	3	4	5	6	7
1.	Simariya Kala (Muhked)	37	0	0	40	0
2.	Thunia Ddana (Chhindwara)	35	2	0	37	0
3.	Moadai (Chhindwara)	44	7	7	33	0
	<b>Adopted Village</b>	<b>116</b>	<b>9</b>	<b>7</b>	<b>110</b>	<b>0</b>
4.	Lahgurua (Muhked)	48	0	0	50	0
5.	Omariya (Muhked)	22	7	0	11	0
6.	Munga (Parasiya)	20	8	0	10	0
7.	Baranga (Parasiya)	38	18	0	11	0
8.	Char Gaon Bhat (Chhindwara)	23	5	6	13	0
9.	Dseriya (Chhindwara)	34	0	10	26	0
	<b>Cluster Village</b>	<b>185</b>	<b>38</b>	<b>16</b>	<b>121</b>	<b>0</b>
	<b>Total All Villages</b>	<b>301</b>	<b>47</b>	<b>23</b>	<b>231</b>	<b>0</b>

6.224 The above table shows that the majority of 231 individuals are from the group of O.B.C. which is 76.74 percent to total of 301 sample individuals from adopted and cluster villages. The combined percentage of S.T. and S.C. individuals is 23.26 to total sample individuals while no. of individuals from general community is nil. Thus the entire area of adopted and cluster villages is predominated by O.B.C. population that throws a challenge before K.V.K. scientists to achieve tangible results.

## INDIVIDUALS CLASSIFIED ON THE BASIS OF RELIGION

6.225 The following table gives the details;

Table No. 6.68  
Classification on the Basis of Religion

S. No.	Name of the Village	No. of Individual	Religion					
			Hindu	Muslim	Sikh	Christian	Nauabudh	Others
1	2	3	4	5	6	7	8	9
1.	Simariya Kala (Muhkhed)	37	37	0	0	0	0	0
2.	Thunia Ddana (Chhindwara)	35	35	0	0	0	0	0
3.	Moadai (Chhindwara)	44	44	0	0	0	0	0
	<b>Adopted Village</b>	116	116	0	0	0	0	0
4.	Lahgurua (Muhked)	48	48	0	0	0	0	0
5.	Omariya (Muhked)	22	22	0	0	0	0	0
6.	Munga (Parasiya)	20	20	0	0	0	0	0
7.	Baranga (Parasiya)	38	38	0	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	23	23	0	0	0	0	0
9.	Dseriya (Chhindwara)	34	34	0	0	0	0	0
	<b>Cluster Village</b>	185	185	0	0	0	0	0
	<b>Total All Villages</b>	301	301	0	0	0	0	0

6.226 The above table shows that cent-percent individuals are the followers of Hindu religion.

## AWARENESS ABOUT THE K.V.K.

5.227 The table below shows the details;

Table No. 6.69  
Awareness About the K.V.K.

S. No	Name of the Village	No. of Individual	Awareness about existence of K.V.K.		If 'yes' knowledge about its location		Awareness about services rendered by the K.V.K.	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Simariya Kala (Muhkhed)	37	37	0	37	0	37	0
2.	Thunia Ddana (Chhindwara)	35	35	0	35	0	35	0
3.	Moadai (Chhindwara)	44	44	0	44	0	44	0
	<b>Adopted Village</b>	116	116	0	116	0	116	0
4.	Lahgurua (Muhked)	48	48	0	48	0	48	0
5.	Omariya (Muhked)	22	22	0	22	0	22	0
6.	Munga (Parasiya)	20	20	0	20	0	20	0
7.	Baranga (Parasiya)	38	38	0	38	0	38	0
8.	Char Gaon Bhat (Chhindwara)	23	23	0	23	0	23	0
9.	Dseriya (Chhindwara)	34	34	0	34	0	34	0
	<b>Cluster Village</b>	185	185	0	185	0	185	0
	<b>Total All Villages</b>	301	301	0	301	0	301	0

6.228 The cent percent awareness about the location and, more important, the services rendered by it is an encouraging indication which shows the positive efforts of the K.V.K. to popularize the functions of K.V.K.

## KNOWLEDGE ABOUT SPECIFIC SERVICES RENDERED BY K.V.K.

6.229 The table below shows the details;

Table No. 6.70  
Specific Services Rendered by the K.V.K.

S. No	Name of the Village	No. of Individual	knowledge about vocational		knowledge about front line demonstration training		knowledge about on farm testing	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Simariya Kala (Muhkhed)	37	37	0	32	0	32	0
2.	Thunia Ddana (Chhindwara)	35	35	0	30	0	30	0
3.	Moadai (Chhindwara)	44	44	0	39	0	39	0
	<b>Adopted Village</b>	116	116	0	101	0	101	0
4.	Lahgurua (Muhked)	48	48	0	39	0	39	0
5.	Omariya (Muhked)	22	22	0	18	0	18	0
6.	Munga (Parasiya)	20	20	0	0	40	0	24
7.	Baranga (Parasiya)	38	38	0	2	54	2	46
8.	Char Gaon Bhat (Chhindwara)	23	23	0	19	0	8	21
9.	Dseriya (Chhindwara)	34	34	0	28	0	27	5
	<b>Cluster Village</b>	185	185	0	106	94	104	96
	<b>Total All Villages</b>	301	301	0	207	94	205	96

6.230 The above table shows the substantial knowledge of individuals about the specific services rendered by the K.V.K. particularly knowledge about vocational training which is cent-percent.

## FIELD VISITS OF K.V.K. SCIENTISTS

6.231 Regular field visits by the K.V.K. scientists are necessary prerequisites for the implementation of agriculture related technology. The table below shows the extent of such visits;

Table No. 6.71  
Field Visits of K.V.K. Scientists

S. No	Name of the Village	No. of Individual	If no the duration gap			
			One month (1)	Two month (2)	More than two month (3)	Never (4)
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	37	0	0	0	0
2.	Thunia Ddana (Chhindwara)	35	2	0	0	0
3.	Moadai (Chhindwara)	44	1	0	0	0
	<b>Adopted Village</b>	116	3	0	0	0
4.	Lahgurua (Muhked)	48	0	0	0	0
5.	Omariya (Muhked)	22	1	0	1	2
6.	Munga (Parasiya)	20	0	0	0	0
7.	Baranga (Parasiya)	38	0	0	2	0
8.	Char Gaon Bhat (Chhindwara)	23	0	0	1	0
9.	Dseriya (Chhindwara)	34	0	0	0	0
	<b>Cluster Village</b>	185	1	0	4	2
	<b>Total</b>	301	4	0	4	2

6.232 Out of total of 301 individuals only 10 individuals [3.32 percent] have reported about irregular visits of the K.V.K. scientists which is quite negligible and can be improved by a bit more careful approach.

### THE STATUS OF REGULAR CONTACT WITH K.V.K.

6.233 The regular contact of the farmes with K.V.K. is one of the determining factors for implementation of agriculture related technologies in the field. The table below shows the details;

Table No. 6.72  
Status of Regular Contact with K.V.K.

S No	Name of the Village	No. of Individual	Are you in regular touch		If yes reason			if 'no' the reason	
			Yes (1)	No (2)	For seed (1)	Plant protection (2)	New technology (3)	Distance (1)	Do not feel the necessity (2)
1	2	3	4	5	6	7	8	9	10
1.	Simariya Kala (Muhked)	37	32	11	0	1	30	7	3
2.	Thunia Ddana (Chhindwara)	35	28	8	0	0	27	7	2
3.	Moadai (Chhindwara)	44	38	9	0	0	38	6	0
	<b>Adopted Village</b>	116	98	28	0	1	95	20	5
4.	Lahgurua (Muhked)	48	38	7	0	2	29	1	0
5.	Omariya (Muhked)	22	18	6	4	0	12	0	0
6.	Munga (Paraisya)	20	16	4	0	0	14	0	0
7.	Baranga (Parasiya )	38	26	10	4	1	23	11	4
8.	Char Gaon Bhat (Chhindwara)	23	14	3	2	2	15	6	9
9.	Dseriya (Chhindwara)	34	26	7	0	2	30	6	3
	<b>Cluster Village</b>	185	138	37	10	7	123	24	16
	<b>Total</b>	301	236	65	10	8	218	44	21

6.234 The above table shows that out of 301 individuals, 236 individuals [78.41 percent] have reported about regular contact with K.V.K. while 65 persons [21.59 percent] have reported about irregular contact. The positive response by 218 individuals [72.43 percent] is mainly due the desire far new technology which obviously is an achievement of the K.V.K. while 18 sample individuals [5.98 percent] have contacted the K.V.K. for seed and plant protection measurers. The main cause of negetive response by 44 individuals [14.62 percent] is the distance factor which the K.V.K. scientists can not help. Twenty one number of individuals have not contacted the K.V.K. as they do not feel the necessity of it. Though the number of such individuals is limited but the attitude is not healthy. The K.V.K. scientists may initiate sincere efforts to stop brewing such attitudinal trend, which, in long run, may be disastrous.

## STATUS OF IMPLEMENTATION OF THE SERVICES OF THE K.V.K.

6.235 The table below shows the details;

Table No. 6.73  
Implementation of the Services of K.V.K.

S No.	Name of the Village	No. of Individual	Implementation of the services of K.V.K.		If yes in what fields				
			Yes (1)	No (2)	Agro-nomy	Hortic-ulture	Animal husbandry	Fishe-ries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Simariya Kala (Muhkhed)	37	31	11	22	10	0	0	0
2.	Thuniya Ddana (Chhindwara)	35	30	7	30	0	0	0	0
3.	Moadai (Chhindwara)	44	39	6	39	0	0	0	0
	<b>Adopted Village</b>	116	100	24	91	10	0	0	0
4.	Lahgurua (Muhked)	48	38	7	39	0	0	0	0
5.	Omariya (Muhked)	22	18	5	18	0	0	0	0
6.	Munga (Paraisya)	20	16	6	16	0	0	0	0
7.	Baranga (Parasiya )	38	26	9	26	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	23	19	7	18	0	0	0	0
9.	Dseriya (Chhindwara)	34	24	2	27	0	0	0	0
	<b>Cluster Village</b>	185	141	36	144	0	0	0	0
	<b>Total</b>	301	241	60	235	10	0	0	0

Table No. 6.73[Contd....]  
Implementation of the Services of K.V.K.

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water-shed	Training of rural youth	Not satisfied with new technology	Problem of resources	Satisfied with present status
1	2	11	12	13	14	15	16	17	18
1.	Simariya Kala (Muhkhed)	0	0	2	0	0	0	11	0
2.	Thuniya Ddana (Chhindwara)	8	0	10	0	0	0	7	0
3.	Moadai (Chhindwara)	0	4	7	0	0	0	6	0
	<b>Adopted Village</b>	8	4	19	0	0	0	24	0
4.	Lahgurua (Muhked)	0	0	0	0	0	0	7	0
5.	Omariya (Muhked)	0	0	3	0	0	0	5	0
6.	Munga (Paraisya)	0	0	0	0	0	0	6	0
7.	Baranga (Parasiya )	0	0	0	0	0	0	9	0
8.	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0	7	0
9.	Dseriya (Chhindwara)	0	0	3	0	0	0	2	0
	<b>Cluster Village</b>	0	0	6	0	0	0	36	0
	<b>Total</b>	8	4	25	0	0	0	60	0

6.236 The above table shows that out of 301 individuals, 241 individuals [80.07 percent] have implemented the services of K.V.K. which is a fair account of achievement. It is worth mentioning that the figure of itemwise coverage will not tally with the figure of 241 as the same person from agronomy might have implemented the improved techniques in the fields of horticulture, animal husbandry etc.

6.237 The subject wise coverage figures show that the highest number of 235 individuals [78.07 percent] have implemented the services of K.V.K. in the fields of agronomy followed by 25 persons [8.31 percent] for organic farming and only 4 individuals have shown interest in agro-forestry.

6.238 Problem of resource is the only factor due to which 60 number of sample individuals [19.93 percent] have not implemented the services of the K.V.K.

### SATISFACTION LEVEL OF THE INDIVIDUALS ABOUT THE SERVICES OF K.V.K.

6.239 The level of satisfaction derived from the services of K.V.K. is important to sustain the efforts of K.V.K. over a period of time. The table below shows the details;

Table No. 6.74  
Satisfaction Level of the Individuals

S. No	Name of the Village	No. of Individual	Satisfied with the impact		If yes in what fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Simariya Kala (Muhkhed)	37	37	0	20	12	0	0	0
2.	Thunia Ddana (Chhindwara)	35	35	0	30	0	0	0	0
3.	Moadai (Chhindwara)	44	44	0	39	0	0	0	0
	<b>Adopted Village</b>	116	116	0	89	12	0	0	0
4.	Lahgurua (Muhked)	48	48	0	39	0	0	0	0
5.	Omariya (Muhked)	22	22	0	18	0	0	0	0
6.	Munga (Paraisya)	20	20	0	16	0	0	0	0
7.	Baranga (Parasiya )	38	38	0	28	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	23	22	1	19	0	0	0	0
9.	Dseriya (Chhindwara)	34	32	2	26	0	0	0	0
	<b>Cluster Village</b>	185	182	3	146	0	0	0	0
	<b>Total</b>	301	298	3	235	12	0	0	0



Table No. 6.74 [Contd...]  
Satisfaction Level of the Individuals

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Technique is difficult to follow	Inputs are not easily available	Non-availability of advice in the time
1	2	11	12	13	14	15	16	17	18
1.	Simariya Kala (Muhkhed)	0	0	2	10	0	0	0	0
2.	Thunia Ddana (Chhindwara)	10	0	8	0	0	0	0	0
3.	Moadai (Chhindwara)	0	4	7	4	0	0	0	0
	<b>Adopted Village</b>	10	4	17	14	0	0	0	0
4.	Lahgurua (Muhked)	0	0	0	0	0	0	1	0
5.	Omariya (Muhked)	0	0	3	0	0	0	1	0
6.	Munga (Paraisya)	0	0	0	0	0	0	0	0
7.	Baranga (Parasiya )	0	0	0	0	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	0	0	0
9.	Dseriya (Chhindwara)	0	0	3	0	0	0	1	0
	<b>Cluster Village</b>	0	0	6	0	0	0	3	0
	<b>Total</b>	10	4	23	14	0	0	3	0

6.240 The above table shows that out of 301 individuals 298 individuals [99.00 percent] have expressed their satisfaction towards impact of the efforts of K.V.K. which in itself is an encouraging achievement.

6.241 Regarding subjectwise level of satisfaction, agronomy is the prime subject where 235 individuals [78.07 percent] have shown their satisfaction followed by organic farming activities [23 individuals] and horticulture [12 individuals] only 3 individuals are not satisfied because of the non-availability of inputs.

## IMPACT ON INCOME ENHANCEMENT

6.242 The table below shows the details;

Table No. 6.75  
Impact on Income Enhancement

S. No.	Name of the Village	No. of Individual	Income enhancement		If yes the fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Simariya Kala(Muhkhed)	37	36	1	20	12	0	0	0
2.	Thunia Ddana (Chhindwara)	35	35	0	30	0	0	0	0
3.	Moadai (Chhindwara)	44	44	0	39	0	0	0	0
	<b>Adopted Village</b>	116	115	1	89	12	0	0	0
4.	Lahgurua (Muhked)	48	48	0	39	0	0	0	0
5.	Omariya (Muhked)	22	22	0	18	0	0	0	0
6.	Munga (Paraisya)	20	20	0	16	0	0	0	0
7.	Baranga (Parasiya )	38	38	0	28	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	23	23	0	19	0	0	0	0
9.	Dseriya (Chhindwara)	34	33	1	27	0	0	0	0
	<b>Cluster Village</b>	185	184	1	147	0	0	0	0
	<b>Total</b>	301	299	2	236	12	0	0	0

Table No. 6.75 [Contd...]  
Impact on Income Enhancement

S. No.	Name of the Village						If no the reasons		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Could not follow the instruction	Problem of resource	Non-availability technical advice in time
1	2	11	12	13	14	15	16	17	18
1.	Simariya Kala (Muhkhed)	0	0	1	0	12	0	0	0
2.	Thunia Ddana (Chhindwara)	10	0	7	1	5	0	0	0
3.	Moadai (Chhindwara)	0	0	9	0	0	0	0	0
	<b>Adopted Village</b>	10	0	17	1	17	0	0	0
4.	Lahgurua (Muhked)	0	0	0	0	0	0	0	0
5.	Omariya (Muhked)	0	0	3	0	0	0	0	0
6.	Munga (Paraisya)	0	0	0	0	0	0	0	0
7.	Baranga (Parasiya )	0	0	0	0	0	1	0	0
8.	Char Gaon Bhat (Chhindwara)	0	0	0	0	0	1	0	0
9.	Dseriya (Chhindwara)	0	0	1	2	0	0	0	0
	<b>Cluster Village</b>	0	0	4	2	0	2	0	0
	<b>Total</b>	10	0	21	3	17	2	0	0

6.243 Out of 301 number of individuals 299 individuals [99.34 percent] have expressed the positive impact of K.V.Ks. efforts over income enhancement which, in itself is an startling achievement. Maximum number of 236 individuals which is 78.40 percent to total individuals have positive response of income enhancement through agronomy followed by response of 21 persons for organic farming and 17 persons for training of rural youth.

#### EXTENT OF INCOME ENHANCEMENT

6.244 Assessment of income level of individuals is one of the most difficult aspects of primary data collection as the persons are usually shy of giving the correct information. However, through indirect approach, information regarding income has been collected which is given in the following table;

Table No. 6.76  
Extent of Income Enhancement

S. No	Name of the Village	No. of Individual	Percentage increase in Income								
			1to 10%	11 to 20%	21 to 30%	31 to 50%	51 to 60%	61 to 70%	71 to 80%	81 to 90%	91 to 100%
1	2	3	4	5	6	7	8	9	10	11	12
1.	Simariya Kala (Muhkhed)	37	37	0	0	0	0	0	0	0	0
2.	Thunia Ddana (Chhindwara)	35	34	1	0	0	0	0	0	0	0
3.	Moadai (Chhindwara)	44	40	4	0	0	0	0	0	0	0
	<b>Adopted Village</b>	116	111	5	0	0	0	0	0	0	0
4.	Lahgurua (Muhked)	48	48	0	0	0	0	0	0	0	0
5.	Omariya (Muhked)	22	17	5	0	0	0	0	0	0	0
6.	Munga (Paraisya)	20	20	0	0	0	0	0	0	0	0
7.	Baranga (Parasiya )	38	38	0	0	0	0	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	23	15	8	0	0	0	0	0	0	0
9.	Dseriya (Chhindwara)	34	28	6	0	0	0	0	0	0	0
	<b>Cluster Village</b>	185	166	19	0	0	0	0	0	0	0
	<b>Total</b>	301	277	24	0	0	0	0	0	0	0

6.245 The above table shows that out of 301 individuals, 277 individuals [92.03 percent] have reported about 1 to 10 percent income enhancement due to the efforts of the K.V.K. while 24 persons [7.97 percent] reported about 11 to 20 percent enhancement in income which is a creditable achievement.

### OPINION ABOUT CONTINUANCE OF THE SERVICES OF K.V.K.

6.246 The table below shows the details;

Table No. 6.77  
Opinion about Continuance of K.V.K. Services

S. No.	Name of the Village	No. of Individual	Continuation of the services of K.V.K.	
			Yes (1)	No (2)
1	2	3	4	5
1.	Simariya Kala (Muhked)	37	35	2
2.	Thunia Ddana (Chhindwara)	35	35	0
3.	Moadai (Chhindwara)	44	44	0
	<b>Adopted Village</b>	116	114	2
4.	Lahguraa (Muhked)	48	48	0
5.	Omariya (Muhked)	22	21	1
6.	Munga (Parasiya)	20	20	0
7.	Baranga (Parasiya )	38	36	2
8.	Char Gaon Bhat (Chhindwara)	23	23	0
9.	Dseriya (Chhindwara)	34	34	0
	<b>Cluster Village</b>	185	182	3
	<b>Total</b>	301	296	5

6.247 The above table shows that out of 301 individuals, 296 individuals [98.34 percent] have opined for continuance of the services of K.V.K. particularly in the fields of agromony and horticulture while only 5 number of individuals [1.66 percent] have given negative opinion which seems natural in view of large number of respondents. **Viewing things from the positive angle, the performance of the K.V.K. is laudable, as the efforts have won the confidence of the farming community of our area of study.**

### SUGGESTIONS FOR ADDITIONAL SERVICES TO BE RENDERED BY THE K.V.K.

6.248 Information regarding suggestions for additional services to be rendered by the K.V.K. has been collected from the individuals. The table below shows the details;

Table No. 6.78  
Suggestions for Additional Services to be Rendered by K.V.K.

S. No.	Name of the Village	No. of Individual	Suggestions for additional services by KVK			
			Production of by product	Marketing strategy	Weather forecasting	Availability of agri. inputs at panchayat level
1	2	3	4	5	6	7
1.	Simariya Kala (Muhkhed)	37	18	3	0	10
2.	Thunia Ddana (Chhindwara)	35	20	8	2	0
3.	Moadai (Chhindwara)	44	24	7	0	8
	<b>Adopted Village</b>	116	62	18	2	18
4.	Lahgurua (Muhked)	48	9	8	2	20
5.	Omariya (Muhked)	22	10	4	4	0
6.	Munga (Paraisya)	20	14	2	0	0
7.	Baranga (Parasiya )	38	8	7	0	7
8.	Char Gaon Bhat (Chhindwara)	23	9	10	0	0
9.	Dseriya (Chhindwara)	34	16	8	1	3
	<b>Cluster Village</b>	185	66	39	7	30
	<b>Total</b>	301	128	57	9	48

- 6.249 Out of 301 individuals, 242 individuals [80.40 percent to total individuals] have given their useful suggestions about introduction of additional services to be rendered by the K.V.K. Important among these are regarding suggestions about **production of by-product of crops, development of marketing strategy for fair return of the product and making available agricultural inputs at Gram Panchayat Level** wherein 128, 57 and 48 individuals respectively have given their useful suggestions.
- 6.240 Regarding production of by-product, that may lead to some processing activities, the work may be initiated in liaison with Industries Department of the district.
- 6.241 Marketing of agriculture produce is gaining importance to avoid the exploitation of farmers by brokers. The intervention of K.V.K. personnel will be very useful if some sort of training is organised for beneficiary cultivators in liaison with Mandi Committees.
- 6.242 Regarding availability of agriculture inputs at Gram Panchayat level, the K.V.K Scientists may bring home the solution in consultation with the Chief Executive Officer of Zila Panchayat by developing modalities for making available things at Gram Panchayat level.
- 6.243 It is, therefore, worth considering to incorporate in the mandate of K.V.K. the subjects like production of by-products and development of marketing strategy of the product of the cultivators.**

#### UTILIZATION OF THE ENHANCED INCOME

- 6.244 Proper utilization of enhanced income is equally important as compared to its generation. The table below shows the utilization of enhanced income of sample individuals for purchase of various agriculture inputs;

Table No. 6.79  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Tractor		Harvester		Thresher	
			Yes(1)	No (2)	Yes(1)	No(2)	Yes(1)	No(2)
1	2	3	4	5	6	7	8	9
1.	Simariya Kala (Muhkhed)	37	2	35	0	37	0	37
2.	Thunia Ddana (Chhindwara)	35	0	35	0	35	0	35
3.	Moadai (Chhindwara)	44	0	44	0	44	0	44
	<b>Adopted Village</b>	116	2	114	0	116	0	116
4.	Lahgurua (Muhked)	48	3	45	0	48	0	48
5.	Omariya (Muhked)	22	0	22	0	22	0	22
6.	Munga (Paraisya)	20	0	20	0	20	0	20
7.	Baranga (Parasiya )	38	0	38	2	36	0	38
8.	Char Gaon Bhat (Chhindwara)	23	0	23	0	23	0	23
9.	Dseriya (Chhindwara)	34	0	34	0	34	0	34
	<b>Cluster Village</b>	185	3	182	2	183	0	185
	<b>Total</b>	301	5	296	2	299	0	301

Table No. 6.79 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Utilization of Enhanced Income					
			Plough		Seed drill		Bullock pair	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	10	11	12	13	14	15
1.	Simariya Kala (Muhkhed)	37	2	35	0	37	2	35
2.	Thunia Ddana (Chhindwara)	35	7	28	0	35	4	31
3.	Moadai (Chhindwara)	44	6	38	0	44	6	38
	<b>Adopted Village</b>	116	15	101	0	116	12	104
4.	Lahgurua (Muhked)	48	1	47	0	48	4	44
5.	Omariya (Muhked)	22	6	16	0	22	1	21
6.	Munga (Paraisya)	20	0	20	0	20	6	14
7.	Baranga (Parasiya )	38	0	38	0	38	4	34
8.	Char Gaon Bhat (Chhindwara)	23	6	17	0	23	3	20
9.	Dseriya (Chhindwara)	34	6	28	0	34	5	29
	<b>Cluster Village</b>	185	19	166	0	185	23	162
	<b>Total</b>	301	34	267	0	301	35	266

Table No. 6.79 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Utilization of Enhanced Income					
			Power/Knapsac sprayer		Handhoe		Storage facility	
			Yes (1)	No(2)	Yes(1)	No(2)	Yes (1)	No (2)
1	2	3	16	17	18	19	20	21
1.	Simariya Kala (Muhkhed)	37	8	29	6	31	0	37
2.	Thunia Ddana(Chhindwara)	35	3	32	8	27	0	35
3.	Moadai (Chhindwara)	44	6	38	2	42	0	44
	<b>Adopted Village</b>	116	17	99	16	100	0	116
4.	Lahgurua (Muhked)	48	13	35	3	45	0	48
5.	Omariya (Muhked)	22	5	17	0	22	0	22
6.	Munga (Paraisya)	20	4	16	0	20	0	20
7.	Baranga (Parasiya )	38	4	34	2	36	0	38
8.	Char Gaon Bhat (Chhindwara)	23	3	20	3	20	0	23
9.	Dseriya (Chhindwara)	34	0	34	6	28	0	34
	<b>Cluster Village</b>	185	29	156	14	171	0	185
	<b>Total</b>	301	46	255	30	271	0	301

Table No. 6.79 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Tube well /Dug well		Electric/diesel motor	
			Yes (1)	No (2)	Yes (1)	No (2)
			22	23	24	25
1.	Simariya Kala (Muhkhed)	37	0	37	0	37
2.	Thunia Ddana (Chhindwara)	35	0	35	0	35
3.	Moadai (Chhindwara)	44	0	44	0	44
	<b>Adopted Village</b>	116	0	116	0	116
4.	Lahgurua (Muhked)	48	0	48	0	48
5.	Omariya (Muhked)	22	0	22	0	22
6.	Munga (Paraisya)	20	0	20	0	20
7.	Baranga (Parasiya )	38	0	38	0	38
8.	Char Gaon Bhat (Chhindwara)	23	0	23	0	23
9.	Dseriya (Chhindwara)	34	0	24	0	24
	<b>Cluster Village</b>	185	0	185	0	185
	<b>Total</b>	301	0	301	0	301

6.245 The above table shows that 152 individuals have utilized their enhanced income for purchase of various agriculture inputs which constitutes 50.50 percent to total number of 301 sample individuals. The purchases are mainly limited on items like tractor, harvester, plough, bullock pairs power/knapsac sprayer and hand hoe. The utilization level of enhanced income for purchase of agriculture input is some what encouraging.

#### IMPACT OF ENHANCED INCOME OVER EDUCATION LEVELS

6.246 The table below shows the impact of enhanced income over levels of education in our area of study;

Table No. 6.80  
Impact of Enhanced Income Over Levels of Education

S. No.	Name of the Village	No. of Individual	Impact on education due to enhanced income		If yes in what manner				
			Yes (1)	No (2)	More Male Children go to primary/middle (1)	More Female Children go to primary/middle (2)	More male children attend secondary level education (3)	More female children attend secondary level education (4)	Male Female children go for higher education non(5)
			4	5	6	7	8	9	10
1.	Simariya Kala (Muhkhed)	37	37	0	30	5	2	0	0
2.	Thunia Ddana (Chhindwara)	35	33	2	24	7	1	0	1
3.	Moadai (Chhindwara)	44	42	2	27	5	8	0	2
	<b>Adopted Village</b>	116	112	4	81	17	11	0	3
4.	Lahgurua (Muhked)	48	46	2	28	8	7	1	2
5.	Omariya (Muhked)	22	17	5	8	6	3	0	0
6.	Munga (Paraisya)	20	18	2	14	2	0	2	0
7.	Baranga (Parasiya )	38	32	6	26	4	2	0	0
8.	Char Gaon Bhat (Chhindwara)	23	22	1	18	4	0	0	0
9.	Dseriya (Chhindwara)	34	21	3	18	1	1	1	0
	<b>Cluster Village</b>	185	166	19	92	25	13	4	2
	<b>Total</b>	301	278	23	203	42	24	4	5

Table No. 6.80 [Contd...]  
Impact of Enhanced Income Over Levels of Education

S. No	Name of the Village	No. of Individual	If no the reasons						
			Educa- tion is no priority (1)	Purchase of agr. inputs (2)	Exp. on religious /social rituals (3)	Purchase of luxutry items like TV fridge two wheeler etc. (4)	Consump- tion of intoxicants (5)	Deposi- ted in the bank (6)	Debt repay- ment (7)
1	2	3	11	12		13	14	15	16
1.	Simariya Kala (Muhkhed)	37	0	1	0	0	0	0	0
2.	Thunia Ddana (Chhindwara)	35	0	4	0	0	0	0	0
3.	Moadai (Chhindwara)	44	0	2	0	0	0	0	0
	<b>Adopted Village</b>	116	0	7	0	0	0	0	0
4.	Lahgurua (Muhked)	48	0	3	0	0	0	0	0
5.	Omariya (Muhked)	22	1	0	0	0	0	0	0
6.	Munga (Paraisya)	20	0	2	0	0	0	0	0
7.	Baranga (Parasiya )	38	2	4	0	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	23	1	1	0	0	0	0	0
9.	Dseriya (Chhindwara)	34	0	1	1	0	0	0	0
	<b>Cluster Village</b>	185	4	11	1	0	0	0	0
	<b>Total</b>	301	4	18	1	0	0	0	0

6.247 Out of 301 individuals, 278 individuals [92.36 percent] have reported positive impact of enhanced income over levels of education while 23 number of individuals [7.64 percent] have refused about such impact. The positive impact is predominant in case of primary and middle level of education for both boys and girls wherein 245 individuals [81.40 percent to total individuals] have reported that due to enhanced income more number of boys and girls are being sent to attend elementary level [primary + middle] of education. The positive impact of enhanced income on levels of education shows the awareness of the sample individuals about value of education.

6.248 Regarding negative responses by 23 individuals, 4 individuals [1.33 percent to total of 301 individuals] have reported that education is no priority to them while 18 individuals [5.98 percent to total individuals] have given the reason of spending the portions of enhanced income over purchase of agriculture inputs. However all these reasons may be overcome by the extension efforts of K.V.K. personnel by convincing the villagers about value of education while they impart vocational training.

#### IMPACT OF ENHANCED INCOME OVER HEALTH STATUS

6.249 Health is again an important social factor that accounts for efficiency in pursuance of any occupation. The table below shows the impact of enhanced income over health status of sample population.

Table No. 6.81  
Impact of Enhanced Income over Health Conditions

S. No.	Name of the Village	No. of Individual	Impact on Health		If yes in what manner				
			Yes (1)	No (2)	Services of medical personnel (1)	Vaccination of children/women done(2)	Child nutrition (3)	Female nutrition during gestation (4)	Adoption of Family welfare measures
1.	Simariya Kala (Muhkhed)	37	37	0	37	0	0	0	0
2.	Thunia Ddana (Chhindwara)	35	32	3	7	15	5	2	3
3.	Moadai (Chhindwara)	44	40	4	33	4	1	1	1
	<b>Adopted Village</b>	116	109	7	77	19	6	3	4
4.	Lahgurua (Muhked)	48	47	1	47	0	0	0	0
5.	Omariya (Muhked)	22	22	0	11	9	2	0	0
6.	Munga (Paraisya)	20	18	2	18	0	0	0	0
7.	Baranga (Parasiya )	38	38	0	38	0	0	0	0
8.	Char Gaon Bhat (Chhindwara)	23	23	0	20	2	1	0	0
9.	Dseriya (Chhindwara)	34	22	2	3	15	3	1	0
	<b>Cluster Village</b>	185	180	5	147	26	6	1	0
	<b>Total</b>	301	289	12	224	45	12	4	4

Table No. 6.81 [Contd...]  
Impact of Enhanced Income over Health Conditions

S. No	Name of the Village	No. of Individual	If no the reasons						
			Health is no priority	Believe in local healing methods	Purchase of agri. inputs	Exp. on religious functions	Luxury items TV Fridge, Two wheeler, Four wheeler	Consumption of intoxicants	Deposited in bank
1.	Simariya Kala (Muhkhed)	37	0	0	1	0	0	0	
2.	Thunia Ddana (Chhindwara)	35	0	2	1	0	0	0	
3.	Moadai (Chhindwara)	44	3	0	1	0	0	0	
	<b>Adopted Village</b>	116	3	2	3	0	0	0	
4.	Lahgurua (Muhked)	48	0	0	0	0	0	0	
5.	Omariya (Muhked)	22	0	0	0	0	0	0	
6.	Munga (Paraisya)	20	0	3	0	0	0	0	
7.	Baranga (Parasiya )	38	0	0	0	0	0	0	
8.	Char Gaon Bhat (Chhindwara)	23	0	0	0	0	0	0	
9.	Dseriya (Chhindwara)	34	0	0	1	0	0	0	
	<b>Cluster Village</b>	185	0	3	1	0	0	0	
	<b>Total</b>	301	3	5	4	0	0	0	

6.250 The above table shows that out of 301 individuals, 289 individuals [96.01 percent to total of 301 individuals] have reported about positive impact of enhanced income over health status which shows the awareness of the sample population about value of keeping good health. The items of positive responses like hiring of the services of medical personnel [224 individuals], vaccination of children/women [45 individuals]. Child nutrition [12 individuals] and adoption of family welfare measures [4 individuals] are indicative of healthy trend since the individuals are more concerned particularly about, the health status of women and children.



6.251 Though the number of individuals with negative response is only 12 [3.99 percent to total of 301 individuals] but the opinion like health is no priority by 3 number of individuals is a sort of red alert to K.V.K. scientists who must uproot such attitude lest they go deep into the thinking of more individuals.

#### IMPACT OF ENHANCED INCOME OVER POTABLE DRINKING WATER SUPPLY

6.252 The table below shows the details;

Table No. 6.82  
Impact of Enhanced Income over Potable Drinking Water Supply

S. No	Name of the Village	No. of Individual	Improve in potable drinking water	
			Yes	No
1	2	3	4	5
1.	Simariya Kala (Muhkhed)	37	19	18
2.	Thunia Ddana (Chhindwara)	35	10	25
3.	Moadai (Chhindwara)	44	11	33
	<b>Adopted Village</b>	116	40	76
4.	Lahgurua (Muhked)	48	21	27
5.	Omariya (Muhked)	22	7	15
6.	Munga (Paraisya)	20	8	12
7.	Baranga (Parasiya )	38	22	16
8.	Char Gaon Bhat (Chhindwara)	23	11	12
9.	Dseriya (Chhindwara)	34	10	14
	<b>Cluster Village</b>	185	79	106
	<b>Total</b>	301	119	182

6.253 The above table shows a reverse situation where the negative response is to the tune of 182 individuals which is 60.47 percent to total of 301 individuals while the positive response is by 119 individuals [39.53 percent]. These facts show that availability of potable drinking water is no priority in rural areas.

#### IMPACT OF ENHANCED INCOME OVER HOUSING CONDITIONS

6.254 The table below shows the details;

Table No. 6.83  
Impact of Enhanced Income over Housing Conditions

S. No	Name of the Village	No. of Individual	Enhancement in income resulted in improved housing contentions	
			Yes	No
1	2	3	4	5
1.	Simariya Kala (Muhkhed)	37	20	17
2.	Thunia Ddana (Chhindwara)	35	12	23
3.	Moadai (Chhindwara)	44	15	29
	<b>Adopted Village</b>	116	47	69
4.	Lahgurua (Muhked)	48	19	29
5.	Omariya (Muhked)	22	10	12
6.	Munga (Paraisya)	20	6	14
7.	Baranga (Parasiya )	38	18	20
8.	Char Gaon Bhat (Chhindwara)	23	10	13
9.	Dseriya (Chhindwara)	34	12	12
	<b>Cluster Village</b>	185	75	110
	<b>Total</b>	301	122	179

6.255 The above table shows that out of 301 individuals, 122 individuals [40.53 percent] have positive responses while 179 individuals [59.47 percent] have refused spending of any amount of enhanced income over improving the housing conditions. The status seems obvious as frequent expenditure over improving the housing condition is not usually done.

#### **AWARENESS ABOUT WELFARE SCHEMES INITIATED BY THE STATE GOVERNMENT WITH ASSISTANCE FROM GOVERNMENT OF INDIA**

6.256 The basic objectives of various welfare schemes initiated by the government are for providing employment opportunities to the target group for augmentation of income thereby improving the quality of life of the individuals/community. Though this information has no direct relevance to the functioning of K.V.K. but its personnel are supposed to popularize such schemes among villagers for taking financial support from such programmes. In the following paragraphs the details of a few important schemes have been given which have direct impact over the livelihoods of sample population.

#### **JAWAHAR GRAM SAMRIDHI YOJANA**

6.257 The former scheme of Jawahar Rojgar Yojna renamed as Jawahar Gram Samridhi Yojna was started from the year 1999-2000 with the basic objective of creating community assets of permanent nature, thereby providing employment to local labour. The survey results show that out of 301 individuals 233 individuals [77.41 percent] are aware of the scheme while rest of 68 individuals [22.59 percent] have no knowledge about the scheme. The scheme is important from the view point of creating community asset that results in availability of employment opportunities. Awareness about this scheme will induce the villagers to assert their demand through Gram Panchayat to develop their area. The K.V.K. personnel may, during their field visits, publicize the utility of the scheme among the villagers.

#### **EMPLOYMENT ASSURANCE SCHEME**

6.258 Started from the year 1997-98, the scheme aims at providing employment to rural population during lean season of agriculture thereby creating community assets. **The response to this scheme is somewhat encouraging as 190 individuals [63.12 percent] are aware about the scheme.**

#### **ESTABLISHMENT OF HAND LOOM UNITS**

6.259 Under this scheme, the units having 5 to 10 looms are registered and loom-shed subsidy and margin money subsidy are given. **Only 3 persons of our sample area are aware of the scheme. When even awareness is not there, there can hardly be any possibility of its implementation in our area of study.**

#### **ESTABLISHMENT OF SERICULTURE UNITS**

6.260 Under this scheme the beneficiaries are given training on various aspects of sericulture activities to supplement their income. For this purpose Resham Kendras spread over in districts assume nodal responsibilities to train the beneficiaries and augment their infrastructure. **Only 2 individuals from our area of study are aware of the existence of such scheme when the scheme is so important for rural economy. The K.V.K. personnel in liaison with concerned district authorities may take-up a campaign for making villagers aware about the benefits of the scheme.**

## ESTABLISHMENT OF FAMILY BASED RURAL INDUSTRIAL UNITS

6.261 The scheme is implemented by the Madhya Pradesh Khadi and Gramodyog Board. Under this scheme the units pertaining to SC, ST and OBCs are given 90 percent subsidy on capital loan and remaining 10 percent loan is given by the banks. The level of awareness about this scheme is reasonably fair as 18 individuals [5.98 percent to total of 301 individuals] are aware about this scheme.

## MID DAY MEALS

6.262 The programme has proved to be an effective incentive for retention of school going children relating to primary education, specially the children coming from low income group. Under this programme cooked meals are provided to the school going children. **The level of awareness of this scheme in our area of study is cent percent.**

## FREE SUPPLY OF TEXT BOOKS

6.263 Under this scheme all the students of primary standard [classes 1<sup>st</sup> to 5<sup>th</sup>] belonging to SC, ST and OBCs and students of classes 1<sup>st</sup> to 3<sup>rd</sup> standards belonging to general communities are given text books free of cost. As per our survey results 234 individuals [77.74 percent] are aware about the scheme while 67 individuals [22.26 percent] are not aware of the scheme. **Since the supply of text books free of cost is mandatory, the individuals unaware of the scheme are either persons having their wards above primary standards of education or the rate of drop-out is so high that they are not particular about the scheme. However, efforts both by persons of school education department and K.V.K. may reduce such extent of unawareness.**

## WOMEN SELF HELP GROUP

6.264 With view to ensure social and economic empowerment of women, self help groups [S.H.Gs.] are formed for making the women confident to face challenges on all fronts, be it social or economic. In this scheme, the members of the group deposit a part of their saving in the fund raised by the group and may take loan to meet their various social and economic obligations, subject to return of the amount with interest. In our area of study 291 individuals [96.68 percent] are aware of this scheme which, ofcourse, is very encouraging that indicates the awareness of individuals about the value of such institution. Unawareness aspect for 10 individuals may easily overcome by little more extension efforts by concerned government officials and persons of K.V.K.

## GRAMYA YOJNA

6.265 Under this scheme the poor women are given interest free loan upto Rs. 500.00 towards starting a small business. After repayment of the first loan within one year, second loan to the tune of Rs. 1500.00 is given. In our area of study, 215 number of individuals [71.43 percent] are aware of this scheme **which is satisfactory.**

## AUSMATI YOJNA

6.266 With the objective of providing better medical assistance to the women belonging to the families living below the poverty line in rural areas, this scheme was started in the year 1999. **For this scheme also the extent of awareness by 246 individuals [81.73 percent] is satisfactory.**

**6.267 In what follows an attempt has been made to summarise the details of individual particulars of adopted and cluster villages.**

- **The frame of the present part of the narration is 310 individuals which is 25 percent of the family members of 25 percent sample households belonging to adopted and cluster villages.**
- **The criteria for selection of individuals are – the persons should be the adult member of the family, he/she should be associated with any programme of the K.V.K., he/she should be literate – may be without having any formal education.**
- **The majority of 231 individuals are from OBC community that accounts for 76.74 percent to total of 301 individuals from adopted and cluster villages.**
- **The cent-percent sample individuals from our area of study are the followers of Hindu religion.**
- **The cent-percent awareness of the individuals about the K.V.K. in terms of its location and more importantly the services rendered by it is an important achievement of the K.V.K.**
- **The cent percent awareness about vocational training is encouraging.**
- **Regarding regular contact with K.V.K. the survey results show the regular contact of 78.41 percent individuals mainly because of the desire for adopting new technology and for obtaining quality seed. The positive impact of the efforts of the K.V.K. is clearly visible.**
- **Out of 301 individuals, 241 individuals have implemented the services of K.V.K. which is 80.07 percent to total respondents which in itself is an achievement of K.V.K's. efforts.**
- **In the field of agronomy maximum number of 235 individuals [78.07 percent to total of 301 individuals] have implemented the improved technique, followed by 25 individuals [8.31 percent] for organic farming and 4 individuals implementing the techniques regarding agro-forestry.**
- **Regarding subjects like animal husbandry, fishery, poultry and training of rural youth not much implementation efforts have been made by sample individuals as for these activities even the vocational trainings have hardly been organised. Intensive efforts are required in the fields of animal husbandry, agro-forestry and watershed activities as these areas are important for rural economy.**
- **Agronomy and horticulture are the subjects for which the satisfaction level is substantial. In subjects like animal husbandry, fishery, poultry and training of rural youth the satisfaction level is negligible because of the basic fact that for these subjects no vocational training in tangible way has been imparted nor the FLDs or OFTs have been organised. Efforts must be made to popularize the activities like animal husbandry, agro-forestry and watershed activities as these fields have immense promise of employment generation followed by income augmentation in rural areas.**
- **About 99 percent positive response regarding impact of K.V.K. services over income enhancement has been reported which is of credit to the efforts of K.V.K. in various fields of its operation.**
- **The extent of income enhancement in the percentage group of 1 to 10 has been reported by 277 persons [92.03 percent] due to impact of various technologies introduced by K.V.K. which, in itself, is a startling achievement.**
- **Out of 301 individuals, 296 individuals [98.34 percent to total individuals] have reported for the continuance of the services of K.V.K. particularly for subjects like agronomy and horticulture which again shows the positive impact of the services rendered by K.V.K.**
- **Regarding suggestions for additional services to be rendered by K.V.K. the sample individuals have given useful suggestions regarding introduction of production of by-products of crops and development of marketing strategy for fair return of the product for incorporation in the training mandates of K.V.K.**

- As regards utilization of enhanced income, 152 individuals [50.50 percent] have informed about purchase of various agriculture inputs out of their income enhancement.
- Out of 301 individuals, 278 individuals [92.36 percent] have reported positive impact of income enhancement over levels of education particularly over the levels of primary education for both boys and girls that shows the awareness of sample individuals about value of educating their wards.
- Out of 301 individuals, 289 individuals [96.01 percent to total of 301 individuals] have reported about positive impact of enhanced income over health status resulting in hiring of the services of medical personnel, vaccination of children/women, better application of child nutrition and adoption of family welfare measures.
- A reverse situation is visualized in case of potable drinking water supply where the negative response is to the tune of 182 individuals [60.47 percent] which shows that the availability of potable drinking water is no priority in rural areas in general and in our area of study in particular against the basic problem of enhancing agriculture income.
- Regarding impact of enhanced income over improving housing conditions, 122 individuals [40.53 percent] have positive response while 179 individuals [59.47 percent] have refused spending any amount of enhanced income over improving the housing conditions. The situation seems obvious as frequent expenditure over improving housing conditions is not done.
- Regarding awareness about various welfare schemes initiated by the State Government with assistance from Government of India, it has been observed that in case of schemes like Jawahar Gram Samridhi Yojna, Employment Assurance Scheme, Mid-Day Meals, Free Supply of Text Books, Women Self Help Group, Gramya and Ausmati Yojna the level of awareness is encouraging while in respect of schemes like Establishment of Hand Loom Units, Establishment of Sericulture Units and Establishment of Family Based Rural Industrial Units the level of awareness is poor.

## RESULTS OF SURVEY–INDIVIDUAL PARTICULARS–CONTROL VILLAGE

- 6.268 In the following paragraphs an attempt has been made to record the reactions of 25 percent of individuals taken from control village of Pipariya Birsa where there is no intervention of KVK. The Total number of family members of the 25 percent of the households in village Pipariya Birsa is 71, the twenty five percent of which is 18 individuals. Therefore, the reactions of 18 number of individuals have been recorded to have a comparison with the reactions of individuals of adopted and cluster villages having direct intervention of KVK. The criteria for selection of individuals for control village are similar to that for adopted and cluster villages.
- 6.269 Like adopted and cluster villages, 10 individuals out of 18 individuals [55.56 percent] are from O.B.C. community, only 3 individual are from S.T. community and 5 individuals are from general community. Non of the persons are from S.C. community Cent-percent individuals are followers of Hindu religion.
- 6.270 Regarding awareness about the **existence of KVK**, 6 individuals of **control village are aware of the its existence against the cent-percent awareness about K.V.K. in-terms of its location and services rendered by it by the individuals of adopted and cluster villages which seems obvious as in such cases the interventiojn of K.V.K. is direct.** Regarding awareness about he services of K.V.K. the response in the control village is negative. Awareness is the basic paramter that leads to positive impact of any activity over a long period of time. **The ultimate aim of any K.V.K. is to cover the entire district in terms of implementation of prevailing and new technology relating to agriculture and**

its allied activities that presupposes awareness about this organisation by the farming community of the district. For this purpose the K.V.K. personnel of district Chhindwara may organize meetings at Gram Panchayat level at least twice in a year inviting one representative from villages where there is no intervention of K.V.K. to make them aware about the utility of services rendered by the K.V.K.

- 6.271 Regarding satisfaction derived from per hectare yield of agronomical and horticulture crops, the 17 individuals of control village [94.44 percent] have expressed their dissatisfaction while for adopted and cluster villages this satisfaction level is substantial. However for improving the per-hectare yield, 13 number of individuals from control village which is 72.22 percent to total of 18 individuals have suggested for organizing training for water conservation methods, followed by 4 individuals [22.22 percent] for organizing training about application of inputs.
- 6.272 Regarding satisfaction level of livestock and dairy activities cent percent individuals have expressed their dissatisfaction **The suggestions forwarded** are making available the improved breed production facilities by 12 individuals [66.67 percent] followed by artificial insemination by 5 individuals [2.78 percent] and one individual [5.56 percent] has opined for making available the improved feed facilities. **It will be worth mentioning that even in cases of adopted and cluster villages the satisfaction level for livestock and poultry activities is negligible.**
- 6.273 As for poultry development the level of dissatisfaction is again cent-percent. **The important suggestions** forwarded are arrangement of improved breeding facilities by 9 individuals [50.00 percent] and providing broiler production facilities by 9 individuals [50.00 percent]. **In case of adopted and cluster villages also the satisfaction level for this activity is negligible.**
- 6.274 Regarding fishery development, again the level of dissatisfaction is cent-percent **supported by the suggestions** like supply of improved feed by 12 individuals [66.67 percent] followed by arranging training about use of improved implements by 6 individuals [33.33 percent] **It is worth mentioning** again that for adopted and cluster villages the level of satisfaction for this activity is nil.
- 6.275 Important information has been collected about adoption of home science activities for augmentation of family income. **Toy making** is one such activity where 5 individuals [27.78 percent] have asked for training facility followed by **pickle preparation** by 5 individuals [27.78 percent]. **Training regarding baking activities** have also been supported by 5 individuals, papad/jam/jelly making by 5 individuals. **It is again worth** mentioning that in case of adopted and cluster villages the positive response in favour of home science activities is substantial.
- 6.276 Regarding training of rural youth for self employment, 12 individuals out of total of 18 sample individuals [66.64 percent] have **suggested** for organizing training programme for **motor binding** which is very relevant for performing agricultural activities followed by 12 individuals in favour of training courses for repair of **diesel engine** that accounts for 66.67 percent to total of 18 sample individuals. For activities like **black smithy, carpentry, masonry, tailoring and cycle/scooter repairs** individuals to the tune of 12 individuals each have suggested for organizing training courses. It will not be out of place to mention here that in case of adopted and cluster villages, no individual has shown any inclination for such activities regarding training of rural youth.

6.277 Regarding educational status of the sample individuals of control village, the survey results show that out of 18 individuals, 9 persons [50.00 percent] have reported positively about their male children attending the **elementary level of education** [primary + middle i.e. classes 1<sup>st</sup> to 8<sup>th</sup> standards] while the response from 19 individuals [50.0 percent] for this item are negative. More or less similar is the situation with girls wherein 7 number of individuals [38.89 percent] have given positive response while 11 number of individuals [61.11 percent] were negative in their responses. Similarly regarding boys students of **secondary level of education**, i.e. from from classes 9<sup>th</sup> to 12<sup>th</sup> standards only 4 individuals [22.22 percent] have informed that their wards attend the school. In case of **higher education** for both male and female children the positive responses is by 2 individuals only. **In case of adopted and cluster villages 92.36 percent individuals have reported about their male and female wards attending the elementary level of education against the average percentage figure of 50.00 for control village that shows better awareness among the sample inhabitants of adopted and cluster villages about value of elementary education.**

6.278 Regarding health status the following table presents a comparative picture between adopted and cluster villages on one side and the control village on the other;

Table No. 6.84  
Comparative Status of Health Facilities Among Sample Individuals

Sl. No.	Item	Status of control village – percentage to total 18 sample individuals	Status of adopted and cluster villages percentage to 301 sample individuals
1	Hiring of services of medical personnel	72.22	74.42
2	Vaccination of children/ pregnant mother	77.78	31.56
3	Child nutrition	55.56	3.99
4	Female nutrition during gestation period	44.44	1.33
5	Adoption of family welfare measures	55.56	1.33

**Note – Only positive responses have been taken into account.**

6.279 The above table shows that except for the item of hiring of services of medical personal where the positive response of individuals from adopted and cluster villages is higher than control village, **in rest of the health parameters the percentage positive responses of the individuals of control village are much higher than that of adopted and cluster villages that shows the relatively higher level of awareness among the sample individuals of control village regarding various health parameters.**

6.280 Regarding status of drinking water facilities, cent percent individuals have responded positively about availability of hand pumps as main source of drinking water. Piped water supply is not in existence in the sample village which seems obvious as in villages in general this facility is seldom available. **In case of adopted and cluster villages also the majority of respondents have informed about hand pums as main source of drinking water in their villages.**

6.281 Regarding housing facilities, 8 number of individuals [44.44 percent] have reported for construction of semi-pucca houses while 5 individual [27.78 percent] have positive response for construction of pucca house.

6.282 The table below shows the comparative level of awareness about the various welfare schemes between adopted/cluster villages and control village;

Table No. 6.85  
Comparative Levels of Awareness

Sl. No.	Name of the Scheme	Level of awareness in percentage for adopted/cluster villages [percent to total of 301 individuals]	Level of awareness in percentage for control village [percent to total of 18 individuals]
1	Jawahar Gram Samridhi Yojna	77.41	22.22
2	Employment Assurance Scheme	63.21	55.56
3	Establishment of Hand Loom Units	1.00	-
4	Establishment of Sericulture Units	0.66	-
5	Establishment of family based rural industrial Units	5.98	-
6	Mid-day Meals	100.00	16.67
7	Free supply of Text Books	77.74	5.56
8	Women Self Help Group	96.68	33.33
9	Gramya Yojna	71.43	-
10	Ausmati Yojna	81.73	44.44

6.283 The above table shows that the level of awareness about welfare schemes is much higher in adopted/cluster villages as compared to control village. Regarding schemes like Establishment of Hand Loom Units, Establishment of Sericulture Units and Establishment of family based rural industrial Units the level of awareness among individuals of control village is nil while that for adopted and cluster villages the level of awareness is marginal. The validity of such schemes therefore is doubtful as since the awareness about these schemes are missing, the plight of their implementation may well be imagined.

6.284 In what follows an attempt has been made to summarise the findings of individual particulars of the control village;

- The majority of individuals i.e. 55.56 percent to total of 18 sample individuals are from O.B.C. community. Cent percent individuals are followers of Hindu religion.
- The cent-percent level of unawareness among sample individuals of control village about the services rendered by the K.V.K. is a matter of concern which shows that a portion of population is unaware about prevailing and new technology relating to agriculture and allied services. Since the ultimate objective of any K.V.K. is to cover the farming communities of entire district, it will, therefore, be worthwhile if the K.V.K. Scientists organize meetings at Gram Panchayat level – twice in a year, inviting representative cultivators from control village and apprise them with latest technology or suggest them to be in regular contact with the cultivators of adopted and cluster villages who are already implementing technologies both prevailing and new relating to agriculture and allied activities.
- Regarding satisfaction level of per hectare yield of agronomical and horticultural crops, the 17 individuals of control village have expressed their dissatisfaction with suggestions to organize training activities on water conservation methods and application of agriculture inputs.
- Regarding satisfaction level derived from present status of livestock and dairy activities cent percent individuals have expressed their dissatisfaction. The suggestions



forwarded are making available the improved breed production facilities, artificial insemination facilities etc.

- As for poultry development the level of dissatisfaction is again cen-percent. The important suggestions forwarded are arrangement of improved breeding facilities and providing broiler production facilities.
- Similarly for fishery development the level of dissatisfaction is cent-percent supported by the suggestions like supply of improved feed and arranging training about use of improved implements.
- For augmentation of income levels, 27.78 percent individuals are in favour of toy making activities followed by pickle preparation by 27.78 percent individuals, backing activities by 27.78 percent individuals and preparation of papad/jam/jelly by 27.78 percent individuals.
- Regarding training of rural youth for self employment, considerable interests hve been shown by the sample individuals of control village pertaining to activities like motor binding, repair of diesel engine, black smithy, carpentry, msonary, tailoring and cycle/scooter repair etc.
- Regarding elementary level of education [classes 1<sup>st</sup> to 8<sup>th</sup> standards] 50.00 percent individuals have reported that their male wards attend the school where as for female wards 38.89 percent individuals have reported in favour of their school attendance.
- A very satisfactory level of health scenario is existing in control villge wherein for most of the basic health parameters the percentage positive response is much higher than the responses from adopted and cluster villages.
- Hand pumps are the main source of drinking water in our control village where cent percent individuals have reported for its existence.
- Regading housing facilities the individuals of control village have shown interest in constructing semi-pucca houses.
- The level of awareness about various welfare schemes initiated by the government is much higher in case of adopted/cluster villages as compared to control village.

## Chapter Seven

### KRISHI VIGYAN KENDRA - SATNA

- 7.1 The district Satna is located in between 23.58<sup>0</sup> to 25.12<sup>0</sup> north latitude to 80.20<sup>0</sup> to 81.23<sup>0</sup> east longitude with total geographical area of 7502 squ.km. which is 2.43 percent to total geographical area of the State.
- 7.2 The average annual rainfall of the district is 1063.2 mm concentrated over the months of June to September. The average maximum temperature during summer is around 41.4<sup>0</sup> celcius while the average minimum temperature during winter is 9.2<sup>0</sup> celcius.
- 7.3 The total population of the district as per census 2001 is 1868648 persons with rural and urban breakups of 1483058 and 385590 persons respectively which is 79.37 percent and 20.63 percent to total population respectively. The percentage of scheduled caste population to total population (as per census 2001) is 16.27 while that of S.T. population is 14.34. The percentage of workers engaged in the occupation of agriculture (as per census 1991) to total workers is 63.54 that shows agriculture is the main stay of the population of Satna district. In the following table a few indicators relating to agriculture has been shown;

Table No. 7.1  
Important Indicators Relating to Agriculture

Sl. No.	Indicators	District Satna	State of Madhya Pradesh
1	2	3	4
1	Percentage of forest area to total geographical area [ha]	27.36	26.65
2	Net cropped area as percent to total geographical area [ha]	49.06	49.02
3	Per-capita net cropped area [ha]	0.20	0.25
4	Per-capita gross cropped area [ha]	0.27	0.34
5	Percentage of double cropped area to net cropped area [ha]	34.62	35.49
6	Net area irrigated as percent to net cropped area [ha]	31.32	37.56
7	Gross area irrigated as percent to gross cropped area [ha]	23.27	28.54
8	Per-capita production of food-grains [Kg.]	323	266
9	Per hectare use of fertilizer [Kg.]	42.05	46.21
10	Gross value of agriculture produce-per hect. [Rs.]	8773	11968
11	Per hectare yield of agriculture produce [Kg.]*		
a)	Paddy	1000	1058
b)	Wheat	1305	1867
c)	Jowar	945	1342
d)	Maize	1344	2072
e)	Gram	698	932
f)	Tuar	501	825
g)	Soybean	634	1137
12	Electrified villages as percent to total inhabited villages	93.11	97.04
13	Energised pump sets per thousand hectare	42	60

\*Figures relate to the year 2003-2004 [Final Forecast]

- 7.4 The per-hectare yield of the most of the crops for district Satna is lower than State average mainly due to paucity of irrigation facilities in the area and overall deficiency in soil productivity.

#### **DETAILS OF KRISHI VIGYAN KENDRA, SATNA BASED ON THE SECONDARY INFORMATION**

- 7.5 The K.V.K., Satna was established in the year 1992. It is located in the Maghgawan Development Block of Satna District. It is being run by an N.G.O. with Training Organizer as chief of the K.V.K., having nine number of technical staff and six number of non-technical staff. The technical staff consists of training associates, farm manager and technical assistant mainly from the disciplines of Agronomy, Horticulture and Veterinary Science. The farm area of the K.V.K. is 25 hect, out of which 15 hectares are cultivated with 7 hectares of irrigated area. The KVK got administrative building of its own.
- 7.6 The K.V.K. has its own demonstration units like poultry unit, farm pond for fishing, mushroom unit and net house along with existence of farmer's hostel where the cultivators can be accomodated during training courses. Regarding availability of irrigation facilities the K.V.K. has 2 number of tubewells, 3 farm ponds and 2 number of diesel operated pump sets, sufficient to irrigate 7 hectares of land. The K.V.K. has also got one four wheeler and two, two wheeler to cater to the transportation needs.
- 7.7 The K.V.K. has adequate number of agricultural implements as detailed below;
1. Tractor with trolly – 1
  2. M.B. Plough –1
  3. Cultivator – 1
  4. Scraper – 1
  5. Thresher – 1
  6. Leveller – 1
  7. Tractor drawn Ferti seed drill –1

These variety of implements are, more or less, sufficient to do the extension work with reasonable efficiency.

- 7.8 The K.V.K. receives an average allocation of Rs. 51.41 lakh per year over the years 2001-2002 to 2003-2004 against which the average expenditure per year is Rs. 52.05 lakh. The table below shows the details;

Table No. 7.2  
Budget Allocation and Expenditure

*Rs. Lakh*

Sl. No.	Particulars	2001-2002		2002-2003		2003-2004		Remarks
		Allocation	Expenditure	Allocation	Expenditure	Allocation	Expenditure	
1	2	3	4	5	6	7	8	9
<b>1.</b>	<b>RECURRING EXPENDITURE</b>							
a	Pay and Allowances	23.0	22.45	26.00	21.85	29.00	27.38	
b	Travelling Allowances	0.50	0.61	1.00	0.99	1.00	1.00	
c	Contingencies	4.00	3.02	3.94	4.07	5.00	4.00	
	<b>Total – 1</b>	<b>27.50</b>	<b>26.08</b>	<b>30.94</b>	<b>26.91</b>	<b>35.00</b>	<b>32.38</b>	
<b>2.</b>	<b>NON-RECURRING EXPENDITURE</b>							
a	Works and Construction	39.50	39.50	-	6.39	8.00	8.54	
b	Establishment of Unit	0.08	0.08	-	-	-	-	
c	Furniture & Equip ment	1.09	1.09	-	-	0.70	0.69	
d	Library	0.10	0.09	0.10	0.10	0.10	0.09	
e	Soil Testing Lab	6.00	5.99	-	0.05	-	-	
f	Farm Development	-	-	-	0.03	0.50	0.49	
g	TV/DVD	-	-	-	-	0.30	0.28	
h	Tractor/ Agri. Equip.	-	-	-	-	4.00	4.04	
i	Generator	-	-	-	-	0.30	0.35	
	<b>Total 2</b>	<b>46.77</b>	<b>46.75</b>	<b>0.10</b>	<b>6.57</b>	<b>13.90</b>	<b>14.48</b>	
	<b>Grand Total 1+2</b>	<b>74.27</b>	<b>72.83</b>	<b>31.04</b>	<b>33.48</b>	<b>48.90</b>	<b>46.86</b>	

7.9 The above table shows a more or less matching share of expenditure against allocation. The major share of allocation is for pay and allowances against very small allocation for performing technical functions which at times lead to in-efficient performance. Re-scheduling of allocation is, perhaps necessary.

7.10 Regarding Technical performance, the information has been collected under following heads;

- Vocational Training
- In-service Training
- Front Line Demonstration
- On Farm Testing.

7.11 In what follows an attempt has been made to present the details of the above mentioned items of technical performance.

## VOCATIONAL TRAINING

7.12 The table below shows the details;

Table No. 7.3  
Status of Vocational Training

Sl. No.	Subject	No. of trainings organised -2003-2004			Total no. of trainees 2003-2004
		Adopted Villages	Cluster Villages	Other Villages	
1	2	3	4	5	6
1	Crop Production	11	4	-	159
2	Horticulture	7	4	-	58
3	Plant Protection	8	4	-	307
4	Veterinary Services	4	4	-	23
5	Home Science	-	-	-	-
6	Ag. Engineering	-	-	-	-
7	Training of Rural Youth for Self Employment				
a.	Plant Protection	6	4	-	44
	Total	36	20	-	591

Note : Other villages [Col. 5] indicate those villages of the district where the training programmes of Agriculture. Department are imparted through K.V.K.

7.13 The above table shows that the total number of vocational training organised in the year 2003-2004 was 56 which was, to some extent, satisfactory. More numbers of vocational training courses have been organised on subjects like crop production, plant protection and horticulture in both adopted villages and cluster villages which seem obvious as the farmers are usually interested in enhancing their crop productivity. **More number of vocational training should have been organised on horticulture as this is one of the important fields of quick income generation with availability of ready market. The organisation of only 10 number of training courses to impart training to rural youth for self employment and attended by only 44 persons [0.07% to total trainees] is indicative of the fact that the villagers are not very confident about such trainings which hardly gurantee any placement.**

7.14 The combined percentage of trainees attending subjects like crop production, plant protection and horticulture to total number of trainees was 88.66 that confirms the fact that farming communities are more interested to enhance their income through adoption of technology particularly in the field of crop production.

## IN SERVICE TRAINING

7.15 This training is related to the field functionaries of Agriculture, Veterinary, Horticulture and Forest Departments. The following table shows the details;

Table No. 7.4  
Status of In-service Training

Sl. No.	Subject	No. of trainings 2003-2004		Total number of trainees 2003-2004
		On campus	Off campus	
1	2	3	4	5
1	Crop Production	2	-	33
2	Plant Protection	2	-	57
	Total	4	-	90

- 7.16 Though the number of training programmes conducted in the year 2003-2004 is satisfactory, arrangement of a few more training programmes particularly for Crop Production and Horticulture would have been more helpful.

### FRONT LINE DEMONSTRATION

- 7.17 Front line demonstrations are conducted under the close supervision of the scientists of the KVK for newly released technologies or those likely to be released in near future with target participants both farmers and extension officers. The table below shows the number of front line demonstrations conducted in the year 2003-2004.

Table No. 7.5  
Status of Front Line Demonstrations

Sl. No.	Subjects	No. of demonstrations 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Pulses	25	4
2	Oil Seeds	25	4
3	Other than pulses and oilseeds	12	4
	<b>Total</b>	<b>62</b>	<b>16</b>

- 7.18 The total of 78 FLDs organised in one year in both in adopted and cluster villages is satisfactory.

### ON FARM TESTING

- 7.19 On farm testing is a part of adaptive research that takes into account existing technology and its application over defined areas and defined group of farmers. The following table shows the details;

Table No. 7.6  
Status of On Farm Testing

Sl. No.	Subject	No. of demonstrations 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Testing of improved varieties of paddy under upland condition	5	4
2	Testing of weed control method in up land paddy	5	4
3	Control of Dowdery mildeo in coriander	5	4
4	Control of Carly Blight in Potato	5	4
	<b>Total</b>	<b>20</b>	<b>16</b>

- 7.20 Organisation of 36 number of on farm testing in one year is an encouraging picture.
- 7.21 Besides organizing training courses on Vocational Training, In Service training, Front Line Demonstration and On Farm Testing the K.V.K., Satna has also organised other training programmes in liaison with the line departments of State Government. The table below shows the details;

Table No. 7.7  
Record of Other Training Courses

Sl. No.	Topic	Year 2003-2004	
		Duration – Days	Organised by
1	2	3	4
1	Krishi Pakhwara	6	Department of Agriculture
2	Bio-farming	1	Department of Agriculture
3	Training on IPM	1	Department of Agriculture
4	Training on IPM	1	Department of Agriculture
5	Biological Cultivation	1	Department of Agriculture
6	Puse Development Programme	1	Department of Agriculture
7	Scientists interaction with farmers	1	Department of Agriculture
8	Integrated Cereal Development Programme	2	Department of Agriculture

- 7.22 The above table shows that most of the training courses organised were related to crop production which seems obvious as the cultivators are usually interested in enhancement of agriculture production. A few number of trainings relating to home science and training of rural youth for self employment could have been organised which would have made such efforts more meaningful. However, it has also been felt that every training programme should have a minimum duration of 4 days to ensure purposeful transaction as about half of the day in case of most of such meetings is usually lost in observing formalities.
- 7.23 One of the important functions of the K.V.K. is to conduct specific research to improve the quality of agriculture produce. The K.V.K., Satna has not conducted specific research any such;
- 7.24 Each K.V.K. is supposed to hold the meeting of Scientific Advisory Committee twice in a year for performing following functions;
- 7.25 The Scientific Advisory Committee will consist of following members;
- |     |  |                  |
|-----|--|------------------|
| 1.  | Head of the host institution   | Chairperson      |
| 2.  | Director, Extension of concerned SAU   | Member           |
| 3.  | Zonal Coordinator of the concerned zone  | Member           |
| 4.  | Representative of ICAR Instt./ICAR Regional Research Station if located in the district or nearby  | Member           |
| 5.  | Associate Director, Research & Extension of the Zonal Research Station in which KVK is located   | Member           |
| 6.  | District officers of the line departments such as Agriculture, Horticulture, Animal Husbandry, Soil conservation, Social/Agroforestry, Sericulture, Fisheries, Irrigation, Social Welfare, Small Scale Industries etc. | Members          |
| 7.  | Representative of the Lead Bank of the District  | Member           |
| 8.  | Farm Radio Officer of the AIR in which KVK is located  | Member           |
| 9.  | Representative of Doordarshan Centre in which KVK is located   | Member           |
| 10. | Two representatives of the farmers - one small and one big nominated by the Head of the Institution  | Member           |
| 11. | Two representatives of Farm Women nominated by Head of the Institution   | Members          |
| 12. | Training Organiser, KVK  | Member Secretary |

7.26 During the years 2002-2003 and 2003-2004, the K.V.K., Satna has organised meeting of the Scientific Advisory Committee.

7.27 The K.V.K., Satna has continuously interacted with district administration, three-tier system of Panchayati Raj Institutions and progressive cultivators of the district and took valuable guidance from them. Publicity measures like organizing Krishi Melas, Field Days, arranging T.V. Interviews and Radio talks were attempted to spread the knowledge about utility of K.V.K. among rural population.

## RESULTS OF THE SURVEY – VILLAGE PARTICULARS

7.28 The study has covered sixty number of villages with ten number of villages from each K.V.K. with bifurcation as follows;

- Three number of Adopted Villages
- Six number of Cluster Villages
- One number of Control Village

The bifurcation as shown above is common to all the six K.V.Ks. covered under the study. The table below gives a few important demographic details of the selected villages of K.V.K., Satna;

Table No. 7.8  
Demographic Particulars

Sl. No.	Name of the Village	Name of the Dev. Block	Total population Census 2001	Of which		Proportion of S.C. population [%]	Proportion of S.T. population [%]	Literacy rate [%]	Household size
				Males Census 2001	Females Census 2001				
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Khodari	Majhgawan	198	114	84	-	36.9	54.6	5
2	Devlaha	Majhgawan	974	497	477	-	58.9	68.8	6
3	Patnakalan	Majhgawan	563	286	277	8.5	86.7	35.8	5
	<b>Total – I</b>		<b>1735 [42.10]</b>	<b>897 [42.67]</b>	<b>838 [41.51]</b>	-	-	-	-
<b>CLUSTER VILLAGES</b>									
4	Kanpur	Majhgawan	357	166	191	-	89.4	33.9	4
5	Tangi	Majhgawan	378	190	188	-	94.4	36.7	5
6	Degarhot	Majhgawan	219	118	101	-	56.2	52.9	6
7	Umariha	Majhgawan	239	127	112	-	87.0	28.9	6
8	Patni	Majhgawan	433	224	209	33.7	59.6	53.0	6
9	Rahaniya	Majhgawan	276	136	140	-	94.6	42.9	5
	<b>Total – II</b>		<b>1902 [46.15]</b>	<b>961 [45.72]</b>	<b>941 [46.60]</b>	-	-	-	-
<b>CONTROL VILLAGE</b>									
10	Bhargawan	Majhgawan	484	244	240	-	68.8	65.4	6
	<b>Total – III</b>		<b>484 [11.75]</b>	<b>244 [11.61]</b>	<b>240 [11.89]</b>				
	<b>Grand Total I+II+III</b>		<b>4121 [100]</b>	<b>2102 [100]</b>	<b>2019 [100]</b>				

Source – Census 2001, Note – Figures in brackets show percentage to total.



7.29 The total population of the ten identified villages as per census – 2001 is 4121 which is 0.28 percent of the total rural population of district Satna. The adopted villages cover 42.10 percent population as compared to total population of ten identified villages covered under the study while for the cluster villages this percentage is 46.15 to the population is of ten villages and for control village the percentage coverage of population is 11.75. The largest village, population wise is Devlaha [adopted village] while the smallest village is Khodari [Adopted Village]. Except for the villages Kanpur and Rahaniya where the female population is more than male population, in rest of the villages a reverse trend is visible. In all the ten identified villages the proportion of ST population is more than that of SC population. Basically all the ten identified villages are tribal predominated where the percentage literacy ranged between 28.9 for village Umariha to 68.8 percent for village Devlaha, not far below the district level percentage literacy of 65.12 and state level figure of 64.11. The above information has pleasantly defied the age-old notion of low percentage literacy in tribal predominated areas. The average size of the family is 5 persons which is in line with state average.

## WORK FORCE

7.30 An analysis of the information regarding workforce for all the ten villages covered under the study will give an idea of the persons engaged in different occupations and also the magnitude of dependent population not pursuing any occupation. The table below shows the details;

Table No. 7.9  
Status of Work Participation

Sl. No	Name of the Village	Work participation rate [%]			Proportion of main workers [%]			Proportion of Marginal workers [%]			Proportion of Non-workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Khodari	42.9	50.0	33.3	36.9	50.0	19.0	6.1	0.0	14.3	57.1	50.0	66.7
2	Devlaha	47.7	48.9	46.5	22.5	38.0	6.3	25.3	10.9	40.3	52.3	51.1	53.5
3	Patnakalan	44.4	50.0	38.6	24.9	45.8	3.2	19.5	4.2	35.4	55.6	50.0	61.4
<b>CLUSTER VILLAGES</b>													
4	Kanpur	48.2	62.0	36.1	22.4	42.8	4.7	25.8	19.3	31.4	51.8	38.0	63.9
5	Tangi	55.0	57.4	52.7	25.4	32.6	18.1	29.6	24.7	34.6	45.0	42.6	47.9
6	Degarhot	35.6	40.7	29.7	27.4	40.7	11.9	8.2	0.0	17.8	64.4	59.3	70.3
7	Umariha	28.9	47.2	8.0	28.5	47.2	7.1	0.4	0.0	0.9	71.1	52.8	92.0
8	Patni	32.6	48.7	15.3	21.7	40.2	1.9	10.9	8.5	13.4	67.4	51.3	84.7
9	Rahaniya	49.6	50.7	48.6	15.9	31.6	0.7	33.7	19.1	47.9	50.4	49.3	51.4
<b>CONTROL VILLAGE</b>													
10	Bhargawan	42.4	46.3	38.3	42.4	46.3	38.3	0.0	0.0	0.0	57.6	53.7	61.7

Source – Census 2001

7.31 The above table shows that the work participation rate ranged between 32.6% for village Patni [Cluster village] to 55.06% for village Tangi [cluster village] with similar participation rate between male and female [with the exception of village Umariha and Patni] which is positive indication indicating awareness and intent of the female population, residing in our sample area to contribute meaningfully towards household income. The proportion of main workers which is, in general, higher than the proportion of marginal workers, that ranged between 15.9 percent for village Rahaniya [cluster village] to 42.4 percent for village Bhargawan [control village]. In cent percent sample villages the male participation as main

workers is higher than female participation while a reverse situation is seen in case of marginal workers where female participation is higher than male participation. This shows that in our sample area of study avenues of activities other than agriculture like preparation of papad/bari/jelly, toy making etc are available that employes substantial number of rural female population. The proportion of non-workers that ranged between 50.4 percent for village Rahaniya [cluster village] to 71.1 percent for village Umariya [cluster village] presents a dismal picture as it shows the higher number of dependent population consisting mainly of children, old persons, infirms and unemployed who are nol in position to contribute much towards family income.

## OCCUPATIONAL DISTRIBUTION

7.32 The table below shows the details;

Table No. 7.10  
Occupational Distribution

Sl. No	Name of the Village	Proportion of Cultivators to total Workers [%]			Proportion of Agr. Labourer to total workers [%]			Proportion of workers in household industries to total workers [%]			Proportion of other workers to total workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Khodari	20.0	15.8	28.6	14.1	5.3	32.1	1.2	1.8	0.0	64.7	77.2	39.3
2	Devlaha	44.1	41.2	47.3	32.5	32.1	32.9	0.2	0.4	0.0	23.2	26.3	19.8
3	Patnakalan	27.2	45.5	2.8	66.8	44.8	96.3	0.0	0.0	0.0	6.0	9.8	0.9
<b>CLUSTER VILLAGES</b>													
4	Kanpur	22.1	35.9	1.4	16.9	20.4	11.6	0.0	0.0	0.0	61.0	43.7	87.0
5	Tangi	53.8	59.6	47.5	45.7	39.4	52.5	0.0	0.0	0.0	0.5	0.9	0.0
6	Degarhot	21.8	27.1	13.3	21.8	27.1	13.3	1.3	2.1	0.0	55.1	43.8	73.3
7	Umariha	47.8	55.0	0.0	14.5	13.3	22.2	0.0	0.0	0.0	37.7	31.7	77.8
8	Patni	49.6	64.2	0.0	27.0	12.8	75.0	2.1	0.0	9.4	21.3	22.9	15.6
9	Rahaniya	27.7	53.6	1.5	72.3	46.4	98.5	0.0	0.0	0.0	0.0	0.0	0.0
<b>CONTROL VILLAGE</b>													
10	Bhargawan	91.7	92.0	91.3	3.4	1.8	5.4	0.0	0.0	0.0	4.9	6.2	3.3

Source – Census 2001

7.33 Agriculture remains to be the main occupation of the ten villages identified for the study. The proportion of cultivators to the total workers ranged between 20.0 percent for village Khodari [adopted village] to 91.7 percent for village Bhargawan [control village]. **Usually these percentages are also fairly high among adopted and cluster villages that justify the selection of such villages in the group of adopted and cluster.** Out of ten villages, in two number of villages viz. Khodari [adopted village] and Devlaha [adopted village], the proportion of female cultivators is more than that of male cultivators that signifies the awareness and intent of the female members of the farming community to work along with their male counterpart for addition in household income. The trend matches with the modern expectations of equality of gender participation in work that, besides, income augmentation, ensures women empowerment to a great extent. Another significant fact revealed by the above table is that in case of villages like Khodari [adopted village], Devlaha [adopted village], Kanpur [cluster village] Tangi [cluster village] Umariha [cluster village], Patni [cluster village] and Bhargawan [control village] the proportion of cultivators is more than that of agriculture labour which is a sure indication that in these villages the occupation of agriculture is being pursued fairly satisfactorily.

7.34 Regarding proportion of agriculture labour to total workers, that ranged between 3.4 percent for village Bhargawan [control village] to 72.3 percent for village Rahaniya [cluster village], the involvement of female participation in general is more than that of males that indicates the performance of odd jobs regarding farming by women folk of our sample area.

7.35 The situation regarding proportion of workers in household industries to total workers is far from being satisfactory as it ranged between 0.2 percent for villages Devlaha [adopted village] to 2.1 percent for village Patni [cluster village]. In villages like Patnakalan, Kanpur, tangi, Umariha and Bhargawan such secondary sector activity is totality missing. Usually in Madhya Preadesh the status of secondary sector occupation in villages is poor. One of the important factors of rural poverty is absence of such occupations that encourage migration during lean season of agriculture. Such sort of secondary occupation may be encouraged through proper implementation of various welfare schemes, particularly relating to rural development, being run by the government.

7.36 Except for the village Khodari, Kanpur and Degarhot, in rest of the villages, the proportion of other workers to total workers is far below than the proportion of cultivators and agriculture labour to total workers with mixed trend of participation by both males and females.

## LAND USE DETAILS

7.37 The table below shows the land use details of the identified ten villages covered under the study;

Table No. 7.11  
Land Use Details

In hectare

Sl. No.	Name of the Village	Total geographical area	Gross cropped area	Forest	Not available for cultivation	Culti-vable waste	Irrigation				Total irri-gated area	Unirri-gated
							Canal	Pond	Wells	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Khodari	1269	298 [23.48]	436	535	267	-	-	-	1	1 [0.34]	30
2	Devlaha	1027	375 [36.51]	598	54	29	-	-	20	11	31 [8.27]	315
3	Patnakalan	1623	214 [13.19]	1403	6	1	-	-	-	26	26 [12.15]	187
<b>Adopted Village I</b>		3919	887 [22.63]	2437	595	297	-	-	20	38	58 [6.54]	532
4	Kanpur	705	226 [32.06]	425	54	29	-	-	-	9	9 [3.98]	188
5	Tangi	591	163 [27.58]	32	396	121	-	-	-	-	-	42
6	Degarhot	825	603 [73.09]	222	-	409	-	-	-	53	53 [8.79]	141
7	Umariha	591	105 [17.77]	470	16	17	-	-	3	7	10 [9.52]	78
8	Patni	105	96 [91.43]	7	2	11	-	-	-	5	5 [5.21]	80
9	Rahaniya	1172	81 [6.91]	1087	4	16	-	-	-	9	9 [11.11]	56
<b>Cluster Village II</b>		3989	1274 [31.94]	2243	472	603	-	-	3	83	86 [6.75]	585
10	Bhargawan	729	231 [31.69]	351	147	45	-	-	5	23	28 [12.12]	158
<b>Control Village III</b>		729	231 [31.69]	351	147	45	-	-	5	23	28 [12.12]	158
<b>Total – I+II+III</b>		8637	2392 [27.69]	5031	1214	945	-	-	28	144	172 [7.19]	1275

Source – Census, 2001

Note – Col. – 4 = Figures in brackets show percentage to total geographical area.

Col. – 12 = Figures in brackets show percentage to gross cropped area.

7.38 The gross cropped area of the identified ten villages 2392 hectares which is 27.69 percent to total geographical area. The survey area is rich in forest resources as 58.25 percent area to the total geographical area is under forest that indicates a potential for development of forest based industries in the sample area of study.

- 7.39 Regarding irrigation, the percentage of gross irrigated area to gross cropped area is 7.19 percent which is much less than district average of 23.27 percent and state average of 28.54 percent. In adopted villages, cluster and control villages these percentages are 6.54, 6.75 and 12.12 respectively.
- 7.40 Cultivable waste land, that gives promise for expanding agriculture activities is 945 hectares which is 10.94 percent to total geographical area, assures the fact that through the intervention of K.V.K. the expansion of agriculture is possible.

## RURAL ELECTRIFICATION

- 7.41 Rural electrification is one of the important parameters for agricultural development, particularly in the context of energisation of pump sets. The table below shows the details;

Table No. 7.12  
Status of Rural Electrification

Sr. No.	Name of the village	Village Electrified		Regular supply		If irregular, actual hrs. of supply
		Yes	No	Yes	No	
1	2	3	4	5	6	7
1.	Khodari	1	0	0	1	10
2.	Devlaha	1	0	0	1	8
3.	Patnakalan	1	0	0	1	8
	<b>Adopted Villages</b>	3	0	0	3	
4.	Kanpur	1	0	0	1	8
5.	Tangi	1	0	0	1	10
6.	Degarhot	1	0	0	1	10
7.	Umariha	1	0	0	1	6
8.	Patni	1	0	0	1	8
9.	Rahaniya	1	0	0	1	8
	<b>Cluster Villages</b>	6	0	0	6	
10	Bhargawan	1	0	0	1	10
	<b>Control Village</b>	1	0	0	1	
	<b>Total</b>	10	0	0	10	

\*The information in brackets shows the name of the Development Block where the village is located. This information will be common to all the subsequent tables.

- 7.42 All the villages covered under the study are electrified with irregular power supply situations. The power supply of the villages ranged between 6 hours per day for village Umariha [cluster village] to 10 hrs per day for villages Khodari [adoted village] Tangi, Degarhot [cluster villages] and Bhargawan [control village].
- 7.43 Energisation of pump sets is the direct impact of rural electrification over agriculture development. The table below shows the extent of energisation of pump sets in our sample area of study;

Table No. 7.13  
Status of Pump Sets Energised

Sr. No.	Name of the village	Pump sets energized	
		Electricity (No.)	Diesel (No.)
1	2	3	4
1.	Khodari	0	10
2.	Devlaha	0	4
3.	Patnakalan	0	6
	<b>Adopted Villages</b>	0	20
4.	Kanpur	0	4
5.	Tangi	0	4
6.	Degarhot	0	3
7.	Umariha	0	3
8.	Patni	0	40
9.	Rahaniya	2	4
	<b>Cluster Villages</b>	2	58
10	Bhargawan	3	5
	<b>Control Village</b>	3	5
	<b>Total</b>	5	83

7.44 The total number of pump sets energized is 88 which is 0.43 percent to total number of 20375 pump sets energized in district Satna in the year 1999-2000. It may be mentioned here that for district Satna the number of energized pump sets per thousand hectare of gross cropped area is 42 as against the State average of 60 that shows a fair nature of agriculture in the district. **In general, the number of pump sets energized is more in adopted and cluster group of villages as compared to control village which rather, is obvious as these villages have direct intervention of K.V.K. regarding technology transfer for better cultivation practices.** Diesel energized number of pump sets are much more than that of pump sets energized by use of electricity that ranged between 3 numbers in villages Degarhot and Umariha to 40 numbers in village Patni.

#### HOUSEHOLD INDUSTRIAL UNITS

7.45 **The complete absence of the existence of household industrial units in the sample area of our study is not very peculiar as such units are generally not found in rural areas of Madhya Pradesh which is one of the important contributory factors of rural poverty.**

#### COOPERATIVES

7.46 The complete absence of existence of any type of cooperative society in identified ten villages is a definite draw back that particularly indicates the possibility of exploitation of the poor villagers by local money lenders.

7.47 The existence of various basic and infrastructural facilities is important from the angel of absorption capacity of technology of any sort in identified areas to gurantee future chain of development. In the subsequent paragraphs an attempt has been made to present such inventories for sample villages covered under the study.

## BASIC FACILITIES

7.48 The table below shows the details;

Table No. 7.14  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	District head quarter away from the village KM	Tahsil head- quarter		Block head quarter	
			Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	3	4	5	6	7
1.	Khodari	44		24		24
2.	Devlaha	47		6		6
3.	Patnakalan	55		10		10
	<b>Adopted Villages</b>					
4.	Kanpur	55		12		12
5.	Tangi	45		27		27
6.	Degarhot	45		28		28
7.	Umariha	50		8		8
8.	Patni	55		10		10
9.	Rahaniya	49		7		7
	<b>Cluster Villages</b>					
10	Bhargawan	16		14		14
	<b>Control Village</b>					
	<b>Total</b>	10		10		10

Table No. 7.14 [Contd...]  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	Gram Panchayat		Police Station/sub station	
		Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	8	9	10	11
1.	Khodari	0			24
2.	Devlaha	0			5
3.	Patnakalan	0			10
	<b>Adopted Villages</b>				
4.	Kanpur		4		12
5.	Tangi		9		27
6.	Degarhot		9		28
7.	Umariha		2		8
8.	Patni		3		10
9.	Rahaniya		2		7
	<b>Cluster Villages</b>				
10	Bhargawan		6		15
	<b>Control Village</b>				
	<b>Total</b>	3	7		10

7.49 The above table shows the location of district, tahsil and block headquarters quite far away from most of the sample villages. The location of Gram Panchayat within or close to the sample villages is a positive factor that, to some extent, guarantees involvement of villagers in the development of their area. Though in non of the villages police stations are located within the geographical area of the village but within the manageable distance.

## INFRASTRUCTURAL FACILITIES - ROADS

7.50 For the socio-economic development of any area the role of availability of proper road network is very important. The table below shows the status of availability of road network in and around the identified ten villages;

Table No. 7.15  
Road Infrastructure

Sr. No.	Name of the village	Fair weather road		Kharanja road within the village 0 km
		Within the village 0 Km	Away from the village Km	
1	2	3	4	5
1.	Khodari		2	
2.	Devlaha		6	
3.	Patnakalan	0		
	<b>Adopted Villages</b>			
4.	Kanpur	0		
5.	Tangi		12	
6.	Degarhot	0		
7.	Umariha		16	
8.	Patni		21	
9.	Rahaniya		25	
	<b>Cluster Villages</b>			
10	Bhargawan	0		0
	<b>Control Village</b>			
	<b>Total</b>	4	6	1

Table No. 7.15 [Contd...]  
Road Infrastructure

Sr. No.	Name of the village	Link road to all weather road		All weather road	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	6	7	8	9
1.	Khodari	0			20
2.	Devlaha	0		0	
3.	Patnakalan		5		10
	<b>Adopted Villages</b>				
4.	Kanpur		3		4
5.	Tangi	0			23
6.	Degarhot		24		24
7.	Umariha	0			8
8.	Patni		3		10
9.	Rahaniya	0			7
	<b>Cluster Villages</b>				
10	Bhargawan		5	0	
	<b>Control Village</b>				
	<b>Total</b>	5	5	2	8

7.51 Information contained in the above table reveals a near satisfactory situation as in 4 number of villages fair weather roads exist. Kharanja roads are available within one sample village that ensure convenient transport in rainy season within one village with reasonable clean sanitary conditions. But absence of link roads in five villages is a definite draw back that deters the development of activities like animal husbandry and poultry or other such perishable items that require road linkages. One of the basic

reasons for the status of backwardness regarding animal husbandry activities is the absence of road linkages in rural areas. Though the distances of link roads is within the easy reach for most of the villages but in rainy season such destinations become inaccessible leading to so many inconveniences. Moreover, absence of proper road infrastructure abstains the officials to reach such villages that results in perpetual neglect of such areas.

Infrastructural Facilities - Railway Station, Bus Stand/Bus Stop/  
Post Office/S.T.D. Booth

7.52 The table shows the details;

Table No. 7.16  
Facilities Regarding Railway Station/Bus Stand/Bus Stop/Post Office/STD Booths

Sr. No.	Name of the village	Railway station		Bus stand/Bus stop	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6
1.	Khodari		24		20
2.	Devlaha		5		5
3.	Patnakalan		10		10
	<b>Adopted Villages</b>				
4.	Kanpur		12		12
5.	Tangi		27		23
6.	Degarhot		28		24
7.	Umariha		8		8
8.	Patni		10		10
9.	Rahaniya		7		7
	<b>Cluster Villages</b>				
10	Bhargawan		15		15
	<b>Control Village</b>				
	<b>Total</b>		10		10

Table No. 7.16 [Contd...]  
Facilities Regarding Railway Station/Bus Stand/Bus Stop/Post Office/STD Booths

Sr. No.	Name of the village	Post office		STD booth	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	7	8	9	10
1.	Khodari		6		24
2.	Devlaha		5		5
3.	Patnakalan		5		10
	<b>Adopted Villages</b>				
4.	Kanpur		6		12
5.	Tangi		9		27
6.	Degarhot		10		28
7.	Umariha		8		8
8.	Patni		10		10
9.	Rahaniya		7		7
	<b>Cluster Villages</b>				
10	Bhargawan		3		15
	<b>Control Village</b>				
	<b>Total</b>		10		10



7.53 For all the ten sample villages the **railway station** is located away from the village that ranged between 5 kms for village Devlaha [adopted village] to 28 kms for village Umariya [cluster village]. Similar is the situation for bus stand/stop as such facilities are not available within non of the villages. Similarly post office and STD facilities are located away from the identified ten villages.

**Infrastructural Facilities - Agriculture Marketing, Fair Price Shop, Cold Storage**

7.54 Mandi or Sub Mandi being regulated markets are important destinations for fair transaction of agriculture produce. The cold storage is yet another important asset that helps in avoiding distress selling. The table below shows the details;

Table No. 7.17  
Agriculture Marketing, Fair Price Shop, Cold Storage

Sr. No.	Name of the village	Regular market		Weekly market		Mandi	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Khodari		24		24		24
2.	Devlaha		5		6		5
3.	Patnakalan		10		10		10
	<b>Adopted Villages</b>						
4.	Kanpur		12		12		12
5.	Tangi		27		27		27
6.	Degarhot		28		28		28
7.	Umariha		8		8		9
8.	Patni		10		10		10
9.	Rahaniya		7		7		8
	<b>Cluster Villages</b>						
10	Bhargawan		15		15		15
	<b>Control Village</b>						
	<b>Total</b>		10		10		10

Table No. 7.17 [Contd...]  
Agriculture Marketing, Fair Price Shop, Cold Storage

Sr. No.	Name of the village	Sub-Mandi		Fair Price Shop		Cold Storage	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12	13	14
1.	Khodari	0			5		23
2.	Devlaha		5	0			5
3.	Patnakalan		10		1		10
	<b>Adopted Villages</b>						
4.	Kanpur		12		4		12
5.	Tangi		27		3		27
6.	Degarhot		28		6		28
7.	Umariha		9		2		8
8.	Patni		10		3		10
9.	Rahaniya		8		2		7
	<b>Cluster Villages</b>						
10	Bhargawan		15	0			15
	<b>Control Village</b>						
	<b>Total</b>	1	9	2	8		10

7.55 In non of the ten identified villages the facilities like regular market, weekly market and mandi exist. **The availability of sub-mandi facility** within the geographical limit of village Khodari [adopted village] is an encouraging exception which assures fair transaction of agriculture commodities in periheral villages. The non-availability of fair price shops in eight number of villages is a definite gap. The cold storage facilities are located far away from the villages, which, seems natural.

## AGRO BASED INDUSTRIAL UNITS

7.56 The table below shows the details;

Table No. 7.18  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Flour mill		Oil mill		Dal mill	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Khodari		7		44		24
2.	Devlaha	0			5		47
3.	Patnakalan	0			10		45
	<b>Adopted Villages</b>						
4.	Kanpur	0			12		47
5.	Tangi		3		10		43
6.	Degarhot		6		11		44
7.	Umaraha		2		8		50
8.	Patni	0			10		55
9.	Rahaniya		2		7		49
	<b>Cluster Villages</b>						
10	Bhargawan	0			15		4
	<b>Control Village</b>						
	<b>Total</b>	5	5		10		10

Table No. 7.18 [Contd...]  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Saw mill		Repair of Agr. implements	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12
1.	Khodari		24		24
2.	Devlaha		5		5
3.	Patnakalan		10		10
	<b>Adopted Villages</b>				
4.	Kanpur		12		12
5.	Tangi		27		28
6.	Degarhot		28		29
7.	Umaraha		8		8
8.	Patni		11		10
9.	Rahaniya		7		7
	<b>Cluster Villages</b>				
10	Bhargawan		15		15
	<b>Control Village</b>				
	<b>Total</b>		10		10

7.57 The above table shows that out of 10 number of villages, **flour mills** are located within the physical boundaries of 5 number of villages while in rest of 5 villages this facility is located within the easy reach of the villagers. In non of the villages, oil mills, dal mills and saw mills are located within the easy reach of the villagers [except in few marginal cases where the distance is not much]. The non-existence of any unit of repair of agricultural implements is a drawback as the inhabitants of these villages are pursuing agriculture as main occupation.

## **SOCIAL INPUTS – EDUCATION**

### **ELEMENTARY EDUCATION – PRIMARY LEVEL**

7.58 The Universalisation of Elementary Education Programme [U.E.E.] which envisages compulsory enrolment of children upto the age of 14 years of age has become popular in Madhya Pradesh. The table below shows the details of primary level of education in our area of study.

Table No. 7.19  
Status of Primary Level of Education

Sr. No.	Name of the village	Primary School					Non formal education	
		Within the village 0 km	With-in 1 km	With-in 2 km	With-in 3 km	> 3 km	Within the village 0 km	Away from the village km
1	2	3	4	5	6	7	8	9
1.	Khodari	0						5
2.	Devlaha	0						7
3.	Patnakalan	0						3
	<b>Adopted Villages</b>							
4.	Kanpur							
5.	Tangi	0						22
6.	Degarhot	0						20
7.	Umariha	0						9
8.	Patni	0						12
9.	Rahaniya	0						8
	<b>Cluster Villages</b>							
10	Bhargawan	0						10
	<b>Control Village</b>							
	<b>Total</b>	10						10

7.59 **One positive fact revealed by the above table is the existence of primary schools within the geographical limits of all the ten number of villages covered under the study that contributed for higher levels of literacy rate within the sample area.** Non formal education centres meant for working children who can not attend the regular primary institutions are not existing within the sample villages.

### **ELEMENTARY EDUCATION–MIDDLE LEVEL AND ADULT EDUCATION**

7.60 The table below shows the status of middle level and adult education.

Table No. 7.20  
Status of Middle Level and Adult Education

Sr. No.	Name of the village	Middle School			Adult Education			
		In the village 0 km	Within 5 km	More than 5 km	Within 1 km	Within 2 km	Within 3 km	> 3 km
1	2	9	10	11	11	12	13	14
1.	Khodari	0			0			
2.	Devlaha		5					6
3.	Patnakalan		1					10
	<b>Adopted Villages</b>							
4.	Kanpur		4					14
5.	Tangi		5					9
6.	Degarhot			6				44
7.	Umariha			7				10
8.	Patni		2					10
9.	Rahaniya			7				9
	<b>Cluster Villages</b>							
10	Bhargawan		3					12
	<b>Control Village</b>							
	<b>Total</b>	1	6	3	1			9

7.61 The above table shows the location of middle school within the geographical limits of one number of village, Since the criterion of the accessibility of middle school is 3 kms, the three number of villages are therefore within the laid down criterion which is an encouraging picture. Only in village Khodari [adopted village] adult education centre exists.

## SECONDARY LEVEL EDUCATION

7.62 The policy relating to secondary education implies extension of school system in unserved areas, consolidating existing facilities and providing special arrangements for talented students. Inview of above policy decisions the table below shows the details;

Table No. 7.21  
Status of Secondary Level Education

Sr. No.	Name of the village	High School			Higher School (+2)		
		In the village 0 km	Within 5 km	More than 5 km	In the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Khodari			24			24
2.	Devlaha		5			5	
3.	Patnakalan			10			10
	<b>Adopted Villages</b>						
4.	Kanpur			14			14
5.	Tangi			27			27
6.	Degarhot			28			28
7.	Umariha			8			8
8.	Patni			10			10
9.	Rahaniya			7			7
	<b>Cluster Villages</b>						
10	Bhargawan		3				15
	<b>Control Village</b>						
	<b>Total</b>		2	8		1	9

7.63 The above table shows the existence of high school and higher school with 5 km radius for two villages and one village respectively. For rest of the villages these facilities are located far-away from the geographical limits of the identified sample villages.

## COLLEGIATE AND TECHNICAL EDUCATION

7.64 The table below shows the details

Table No. 7.22  
Status of Collegiate and Technical Education

Sr. No.	Name of the village	College			Industrial Training Instt.		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Khodari			43			43
2.	Devlaha			47			47
3.	Patnakalan			50			53
	<b>Adopted Villages</b>						
4.	Kanpur			55			55
5.	Tangi			45			45
6.	Degarhot			45			44
7.	Umariha			50			50
8.	Patni			55			55
9.	Rahaniya			49			49
	<b>Cluster Villages</b>						
10	Bhargawan			10			14
	<b>Control Village</b>						
	<b>Total</b>			10			10

7.65 The above table shows that in non of the villages these facilities are located within the physical limits of ten sample villages which seem obvious as colleges and I.T.Is. are usually located at district or tahsil headquarters.

## HEALTH

7.66 Primary health care approach being the core strategy of the Tenth Plan for Madhya Pradesh, a multi tier health and family welfare service delivery system has been developed in the State consisting of sub-health centres, primary health centres and community health centres. Besides, civil hospitals, district hospitals and other special health care institutions have been provided as a support to three tier system. The norms accepted for three tier system is given below;

- Sub Health Centre for every 5,000 population in non-tribal areas and 3,000 population in tribal.
- Primary Health Centre for every 30,000 population in non-tribal areas and 20,000 population in tribal areas.
- Community Health Centre for 1,20,000 population in non-tribal areas and 80,000 population in tribal areas.

7.67 On the basis of aforesaid population criteria, the locational analysis of sub-health centres and Rural Family Welfare Centres may be attempted.

7.68 The table below shows the details;

Table No. 7.23  
Rural Health Infrastructure

Sr. No.	Name of the village	Sub Health Centre			Rural Family Welfare Centre		
		Within the Village 0 km	Within 5 km	More than 5 km	Within the Village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Khodari			24			6
2.	Devlaha		5			5	
3.	Patnakalan			10			10
	<b>Adopted Villages</b>						
4.	Kanpur			14			14
5.	Tangi			27			9
6.	Degarhot			28			7
7.	Umariha			8			8
8.	Patni			10			10
9.	Rahaniya			7			7
	<b>Cluster Villages</b>						
10	Bhargawan			15			15
	<b>Control Village</b>						
	<b>Total</b>		1	9		1	9

Table No. 7.23 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Government Hospital			Government Dispensary		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	9	10	11	12	13	14
1.	Khodari			24			6
2.	Devlaha		5			5	
3.	Patnakalan			10			10
	<b>Adopted Villages</b>						
4.	Kanpur			14			14
5.	Tangi			27			27
6.	Degarhot			28			28
7.	Umariha			8			8
8.	Patni			10			10
9.	Rahaniya			7			7
	<b>Cluster Villages</b>						
10	Bhargawan			15			15
	<b>Control Village</b>						
	<b>Total</b>		1	9		1	9

Table No. 7.23 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Private Clinic			Nursing Home		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	15	16	17	18	19	20
1.	Khodari			24			24
2.	Devlaha		5			5	
3.	Patnakalan			10			10
	<b>Adopted Villages</b>						
4.	Kanpur			14			14
5.	Tangi			27			27
6.	Degarhot			28			28
7.	Umaraha			8			7
8.	Patni			10			10
9.	Rahaniya			7			7
	<b>Cluster Villages</b>						
10	Bhargawan			15			15
	<b>Control Village</b>						
	<b>Total</b>		1	9		1	9

**7.69 Against the total number of 10 villages only one village i.e. Devlaha [adopted village] has sub health centre within 5 kms of the geographical limits of the village. In rest of the 9 villages [all from adopted and cluster villages] The sub health centre is located more than 5 km distance from the village.**

7.70 Regarding Rural Family Welfare Centre, in non of the villages this facility is located within the village. In village Devlaha this facility is located within easy reach of the villagers while for rest of the 9 villages this facility is locted far away from the villages.

7.71 As regards government hospitals, the facility is not available within the geographical limits of any of the sample village while in 1 number of village this facility is available within 5 km radius of the village and for 9 number of villages, government hospitals are located more than 5 kms away from the village ranging between 7 kms for village Rahaniya [cluster village] to 28 kms for village Degarhot [control village]. Similar is the situation with government dispensaries.

7.72 In non of the ten identified villages the private clinic and nursing homes exist within the geographical limit of the village.

## **FAMILY WELFARE**

7.73 Limiting the size of the family is the most important parameter of family welfare measures. The table below shows the status of the acceptors of family welfare measures in the sample villages covered under the study.

Table No. 7.24  
Status of Acceptors of Family Welfare Measurer

Sr. No	Name of the village	Total Workers	Acceptors of Nirodh (No. of Benefic-iaries)	Tubectomy (No. of Benefic-iaries)	Vasectomy (No. of Benefic-iaries)	Loop Insertion (No. of Benefic-iaries)	Oral Pills (No. of Benefic-iaries)	Traditional Methods (No. of Benefic-iaries)
1	2	3	4	5	6	7	8	9
1.	Khodari	85	5 [5.88]	21 [24.71]	3 [3.53]	0	15 [17.65]	0
2.	Devlaha	465	6 [1.29]	8 [1.72]	4 [0.86]	0	11 [2.37]	0
3.	Patnakalan	250	5 [2.00]	9 [3.60]	0	3 [1.20]	10 [4.00]	1 [0.40]
	<b>Adopted Villages</b>	800	16 [2.00]	38 [4.75]	7 [0.89]	3 [0.38]	36 [4.50]	1 [0.13]
4.	Kanpur	172	2 [1.16]	11 [6.40]	3 [1.74]	4 [2.33]	12 [6.98]	0
5.	Tangi	208	2 [0.96]	7 [3.37]	0	0	6 [2.88]	0
6.	Degarhot	78	2 [2.56]	14 [17.95]	2 [2.56]	0	15 [19.23]	0
7.	Umariha	69	2 [2.90]	5 [7.25]	1 [1.45]	0	3 [4.35]	0
8.	Patni	141	2 [1.42]	8 [5.67]	0	0	3 [2.13]	0
9.	Rahaniya	137	2 [8.76]	7 [5.11]	0	2 [1.46]	2 [1.46]	0
	<b>Cluster Villages</b>	805	12 [1.49]	52 [6.46]	6 [0.75]	6 [0.75]	41 [5.09]	0
10	Bhargawan	205	8 [3.90]	11 [5.37]	2 [0.98]	0	6 [2.93]	1 [0.49]
	<b>Control Village</b>	205	8 [3.90]	11 [5.37]	2 [0.98]	0	6 [2.93]	1 [0.49]
	<b>Total</b>	1810	36 [1.99]	101 [5.58]	15 [0.83]	9 [0.50]	83 [4.59]	2 [0.11]

*Note : Figures in brackets show the percentage to figures of column 3 laterally.*

7.74 In the above table the percentage figures have been arrived at on the basis of the figures of the workforce which is, in strict sense is not correct. The comparison should have been on the basis of the figures of eligible couples. Since village wise such figures are not available, therefore as a second option the work force figures that usually include persons within the age group of 15 to 59 years have been taken who may be considered as population with reproductive capacity, particularly males.

7.75 Against the total figure of 1810 persons in the work force the total number of persons adopting various methods of family welfare is 246 which is 13.59 percent to total work force of ten identified villages. The performance to some extent is satisfactory as the figure would have gone to much higher level had the comparison made with the figure of eligible couple. As has been expected, the emphasis is more on the methods of tubectomy and oral pills than on any other method.

## DRINKING WATER

7.76 The table below shows the existing level of drinking water facilities available in the sample villages.



Table No. 7.25  
Status of Drinking Water Facilities

Sl. No.	Name of the Village	Sources of drinking water				
		In the village	Distance from the village			
			=1 KM	=2 KMS.	=3 KMS.	=4KMS.
1	2	3	4	5	6	7
	<b>Adopted Villages</b>					
1	Khodari	0	-	-	-	-
2	Devlaha	0	-	-	-	-
3	Patnakalan	0	-	-	-	-
	<b>Cluster Villages</b>					
4	Kanpur	0	-	-	-	-
5	Tangi	0	-	-	-	-
6	Degarhot	0	-	-	-	-
7	Umaraha	0	-	-	-	-
8	Patni	0	-	-	-	-
9	Rahaniya	0	-	-	-	-
	<b>Control Village</b>					
10	Bhargawan	0	-	-	-	-
	<b>Total</b>	10	-	-	-	-

7.77 In all the 10 number of sample villages one or other drinking water source, mostly hand pumps is available.

7.78 In what follows an attempt has been made to summarise the details of the village particulars.

- The basic purpose of the collection of information about village facilities for identified ten villages is to ascertain the absorption capacity of any prevailing or new technology regarding any field what-so-ever.
- The total population of 10 identified villages is 4121 which is 0.28 percent of total rural population of Satna district.
- Basically all the ten identified villages are tribal predominated where the percentage literacy ranged between 28.9 for village Umaraha to 68.8 percent for village Devlaha, not far below the district level percentage literacy of 65.12 and state level figure of 64.11. The average size of the family is 5 persons.
- The work participation rate ranged between 32.6 percent for village Patni [cluster village] to 55.0 percent for village Tangi [cluster village].
- The proportion of main workers, in general is higher than marginal workers with male participation higher than female participation.
- A reverse situation is visible in case of marginal workers where female participation is more than male participation.
- The proportion of non-workers that ranged between 50.4 percent for village Rahaniya [cluster village] to 71.1 percent for village Umaraha [cluster village] presents a dismal picture.
- The agriculture remains to be the main occupation of the ten identified villages covered under the study with substantial proportion of cultivators as compared to agriculture labour. In two number of villages viz. Khodari [adopted village] and Devlaha [adopted village] the proportion of female cultivators is more than that of male cultivators that signifies the awareness and intent of the female members of the farming community to work along with their male counterpart.
- The situation regarding proportion of workers in household industries is far from being satisfactory as it ranged between 0.2 percent for village Devlaha [adopted village] to 2.1 percent for village Patni [cluster village].

- Regarding land use, the survey area is rich in forest resources as 58.25 percent area to the total geographical area is under forest. Regarding irrigation the percentage of gross irrigated to gross cropped area is 7.19, which is less than district average of 23.27 percent and state average of 28.54 percent.
- All the villages covered under the study are electrified with irregular power supply situation.
- The total number of pumpsets energized is 88 which is 0.43 percent of total number of 20375 pumpsets energized in district Satna in the year 1999-2000.
- The complete absence of the existence of household industrial units and cooperative societies presents a dismal picture.
- The location of Gram Panchayat within or close to the sample villages is a positive factor that, to some extent, guarantees involvement of villagers in the development of their area.
- The status of road infrastructure in identified 10 number of villages is fairly satisfactory.
- The facility of railway station and bus stand/stop is not available within the close proximity of any of the village.
- The availability of sub-mandi facility within the geographical limit of village Kodari [adopted village] is an encouraging factor.
- In non of the villages the oil mills, dal mills saw mills and repair units are located within easy reach of the villagers.
- Regarding education, the existence of primary school within the geographical limits of all the ten number of villages covered under the study is encouraging factor that contributed to higher levels of literacy rate.
- Regarding health scenario, in non of the identified ten number of villages the facilities like sub-health centre, rural family welfare centre, government hospitals and dispensaries, private clinics and nursing homes exist within villages or their nearby limits.
- Against the total of 1810 persons in the work force the total number of persons adopting various methods of family welfare is 246 which is 13.59 percent to total work force of ten identified villages.
- In all the 10 number of sample villages one or other drinking water source, mostly hand pumps, is available.

#### **Results of Survey**

#### **- Household Particulars**

- 7.79 The present part of the chapter deals with the information relating to the households in the following dimensions;
- (i) Macro Dimensions – Wherein information from all the households residing in 10 number of sample villages has been collected.
  - (ii) Micro Dimensions – Wherein 25 percent of the households have been identified for the detailed enquiry.
- 7.80 In what follows an attempt has been made to detail out both macro and micro dimensions based on the information collected through House Listing Schedule and household Schedule.

#### **MACRO DIMENSIONS – GENERAL PARTICULARS**

- 7.81 The table below shows the details;

Table No. 7.26  
Household Details

S. No.	Name of the Village	No. of household as on the date of survey	Population Census-2001	Average size of the family (based on the figure of col.4)
1	2	3	4	5
1.	Khodari	19	198	10
2.	Devlaha	40	974	24
3.	Patnakalan	70	563	8
	<b>Adopted Villages</b>	129	1735	13
4.	Kanpur	43	357	8
5.	Tangi	21	378	18
6.	Degarhot	31	219	7
7.	Umariha	23	239	10
8.	Patni	42	433	10
9.	Rahaniya	29	276	9
	<b>Cluster Villages</b>	189	1902	10
10	Bhargawan	31	484	15
	<b>Control Village</b>	31	484	15
	<b>Total</b>	349	4121	11

7.82 The total number of households as per survey is 349 for all the ten identified village. The average size of the family comes to 11 persons which is more than the average size of the family of 5 persons. For villages Devlaha and Tangi the average size of the family is 24 and 18 respectively that needs the special attention of district administration.

### SOCIAL STATUS OF THE HOUSEHOLDS

7.83 The table below shows the social status of the households;

Table No. 7.27  
Social Status of the Households.

S. No.	Name of the Village	No. of Household	Caste (Social classification)				Interaction with KVK	
			S.T.	S.C.	O.B.C.	General	Yes	No
1	2	3	4	5	6	7	8	9
1.	Khodari	19	10	7	0	2	19	0
2.	Devlaha	40	32	0	8	0	40	0
3.	Patnakalan	70	44	15	11	0	70	0
	<b>Adopted Villages</b>	129	86	22	19	2	129	0
4.	Kanpur	43	21	22	0	0	43	0
5.	Tangi	21	21	0	0	0	21	0
6.	Degarhot	31	25	0	5	1	31	0
7.	Umariha	23	18	2	1	2	23	0
8.	Patni	42	5	32	3	2	42	0
9.	Rahaniya	29	27	0	0	2	29	0
	<b>Cluster Villages</b>	189	117	56	9	7	189	0
10	Bhargawan	31	26	0	3	2	31	0
	<b>Control Village</b>	31	26	0	3	2	31	0
	<b>Total</b>	349	229	78	31	11	349	0

7.84 The above table shows the prepondence of S.T., S.C. households, the combined percentage of which is 87.97 to total number of 349 households which underlines one important fact that the vulnerable communities in our sample villages are pursuing the agriculture occupation in viable manner. All the households have interacted with K.V.K. in one way or other.

## HOUSEHOLDS CLASSIFIED ON THE BASIS OF RELIGION

7.85 The table below shows the details;

Table No. 7.28  
Distribution of Households according to Religion

S. No.	Name of the Village	No. of Household	Hindu	Muslim	Sikh	Christian	Nu-Buddh
1	2	3	4	5	6	7	8
1.	Khodari	19	19	0	0	0	0
2.	Devlaha	40	40	0	0	0	0
3.	Patnakalan	70	70	0	0	0	0
	<b>Adopted Villages</b>	129	129	0	0	0	0
4.	Kanpur	43	43	0	0	0	0
5.	Tangi	21	21	0	0	0	0
6.	Degarhot	31	31	0	0	0	0
7.	Umariha	23	23	0	0	0	0
8.	Patni	42	42	0	0	0	0
9.	Rahaniya	29	29	0	0	0	0
	<b>Cluster Villages</b>	189	189	0	0	0	0
10	Bhargawan	31	31	0	0	0	0
	<b>Control Village</b>	31	31	0	0	0	0
	<b>Total</b>	349	349	0	0	0	0

7.86 All the households in our area of study belong to Hindu religion.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – MAIN OCCUPATION PRIMARY SECTOR – AGRICULTURE

7.87 The table below shows the details;

Table No. 7.29  
Household According to their Main Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Khodari	19	9	9	1	0
2.	Devlaha	40	20	20	0	0
3.	Patnakalan	70	42	22	3	0
	<b>Adopted Villages</b>	129	71	51	4	0
4.	Kanpur	43	19	15	3	0
5.	Tangi	21	8	6	0	0
6.	Degarhot	31	11	12	0	0
7.	Umariha	23	2	19	0	0
8.	Patni	42	12	19	0	0
9.	Rahaniya	29	8	15	1	0
	<b>Cluster Villages</b>	189	60	86	4	0
10	Bhargawan	31	5	19	1	0
	<b>Control Village</b>	31	5	19	1	0
	<b>Total</b>	349	136	156	9	0

7.88 Out of the total number of 349 households 301 number of households constituting 86.25 percent to total households are engaged directly in agriculture as their main occupation that clearly indicates the proper rationale of selection of villages in the groups of adopted and cluster. The combined percentage of other farmers and small farmers is 47.28 that justifies one fact clearly that the absorption capacity of new or prevailing technologies exists in our area of study which in due course will definitely cover the marginal farmers as well.

#### PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

7.89 Activities allied to agriculture are equally important as additional source of income and employment in rural areas. The table below shows the details;

Table No. 7.30  
Households according to their Main Occupations – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Produce Collection	Livestock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Khodari	19	0	0	0	0
2.	Devlaha	40	0	0	0	0
3.	Patnakalan	70	0	0	0	0
	<b>Adopted Villages</b>	129	0	0	0	0
4.	Kanpur	43	0	0	0	0
5.	Tangi	21	0	0	0	0
6.	Degarhot	31	0	0	0	0
7.	Umariha	23	0	0	0	0
8.	Patni	42	5	0	0	0
9.	Rahaniya	29	0	0	0	0
	<b>Cluster Villages</b>	189	5	0	0	0
10	Bhargawan	31	0	0	0	0
	<b>Control Village</b>	31	0	0	0	0
	<b>Total</b>	349	5	0	0	0

7.90 The above table shows that in non of the 10 identified villages the activities like livestock, fishing and hunting are being pursued as main occupation. Only marginal number of 5 households are engaged in minor forest produce collection work. In short activities allied to agriculture are not popular in our area of study.

#### SECONDARY AND TERTIARY SECTORS

7.91 Secondary and tertiary sector occupations are important from view points of income augmentation and employment generation and absorption of work force in lean season of agriculture.

7.92 In non of the villages secondary and tertiary sector occupations are being pursued by any of the households which is an indication of definite gap in the economic scenario of the area covered under the study.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – SUBSIDIARY OCCUPATIONS

### PRIMARY SECTOR – AGRICULTURE

7.93 Agriculture as subsidiary occupation is not being pursued by any of the households in our area of study.

### PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

7.94 The table below shows the details;

Table No. 7.31  
Households According to their Subsidiary Occupation – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Produce Collection	Livestock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Khodari	19	18	0	0	0
2.	Devlaha	40	40	0	0	0
3.	Patnakalan	70	68	0	0	0
	<b>Adopted Villages</b>	129	126	0	0	0
4.	Kanpur	43	43	0	0	0
5.	Tangi	21	21	0	0	0
6.	Degarhot	31	31	0	0	0
7.	Umariha	23	23	0	0	0
8.	Patni	42	37	0	0	0
9.	Rahaniya	29	27	0	0	0
	<b>Cluster Villages</b>	189	182	0	0	0
10	Bhargawan	31	31	0	0	0
	<b>Control Village</b>	31	31	0	0	0
	<b>Total</b>	349	339	0	0	0

7.95 Minor forest produce collection is a popular activity in all the ten number of sample villages which is evident from the fact that 97.13 percent households to total of 349 households are engaged in this activity as a source of their subsidiary income. Non of the households are pursuing activities like livestock, fishing and hunting even as subsidiary occupation.

### SECONDARY AND TERTIARY SECTORS

7.96 The table below shows the details;

Table No. 7.32

## Households According to their Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of Household	Secondary Sector		Tertiary Sector	
			Servicing and Repairs	Construction Work	Govt. Service	Service in Private Sector
1	2	3	4	5	6	7
1.	Khodari	19	0	0	0	0
2.	Devlaha	40	0	0	0	0
3.	Patnakalan	70	0	0	0	2
	<b>Adopted Villages</b>	129	0	0	0	2
4.	Kanpur	43	0	0	0	0
5.	Tangi	21	0	0	0	0
6.	Degarhot	31	0	0	0	0
7.	Umariha	23	0	0	0	0
8.	Patni	42	0	0	0	0
9.	Rahaniya	29	0	0	0	2
	<b>Cluster Villages</b>	189	0	0	0	2
10	Bhargawan	31	0	0	0	0
	<b>Control Village</b>	31	0	0	0	0
	<b>Total</b>	349	0	0	0	4

7.97 Involvement of households in activities relating to secondary sector as subsidiary occupation is nil in our area of study while only 4 households are engaged in tertiary sector mostly employed in private sector.

7.98 **The only conclusion that can be drawn from the narrations in foregoing paragraphs is that agriculture is the only activity of the area under study which is being pursued on viable scale.**

**AVERAGE MONTHLY INCOME**

7.99 In any survey work the most difficult part is the collection of information regarding income and expenditure of the household with reasonable accuracy as the households are very cautious about parting with the facts. However, the information shows a trend that may be useful for supporting conclusions which have direct or indirect relations with levels of income of the households. The table below shows the details;

Table No. 7.33  
Average Monthly Income

S. No.	Name of the Village	No. of House hold	Blow Rs.500	Rs.5001 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Khodari	19	0	0	0	1	5	3	10
2.	Devlaha	40	0	0	0	0	0	1	39
3.	Patnakalan	70	0	0	0	1	0	17	52
	<b>Adopted Villages</b>	129	0	0	0	2	5	21	101
4.	Kanpur	43	1	0	0	0	1	7	34
5.	Tangi	21	0	0	0	1	3	4	13
6.	Degarhot	31	0	0	0	1	0	2	28
7.	Umariha	23	0	0	0	0	3	6	14
8.	Patni	42	0	0	0	2	3	12	25
9.	Rahaniya	29	0	0	0	4	4	3	18
	<b>Cluster Villages</b>	189	1	0	0	8	14	34	132
10	Bhargawan	31	0	0	0	0	0	2	29
	<b>Control Village</b>	31	0	0	0	0	0	2	29
	<b>Total</b>	349	1	0	0	10	19	57	262

7.100 The viable nature of agriculture as main and subsidiary occupations is reflected by the fact that out of 349 number of households the combined number of households within the income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001 and above per month is 319 which is 91.40 percent to total households. In adopted villages this percentage is 94.57 while in cluster villages it is 87.83 percent. Even in control village where there is no intervention of K.V.K. the percentage of households within the income range Rs. 901.00 to Rs. 1000.00 and Rs. 1001 and above per month is cent percent that shows overall affluence level of the area.

## AVERAGE MONTHLY EXPENDITURE

7.101 The table below shows the details;

Table No. 7.34  
Average Monthly Expenditure

S. No.	Name of the Village	No. of Household	Blow Rs.500	Rs.501 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Khodari	19	0	0	0	0	0	1	18
2.	Devlaha	40	0	0	0	0	0	2	38
3.	Patnakalan	70	0	0	0	0	0	10	60
	<b>Adopted Villages</b>	129	0	0	0	0	0	13	116
4.	Kanpur	43	0	0	0	0	0	1	42
5.	Tangi	21	0	0	0	0	0	1	20
6.	Degarhot	31	0	0	0	1	0	1	29
7.	Umariha	23	0	0	0	0	0	1	22
8.	Patni	42	0	0	0	1	0	3	38
9.	Rahaniya	29	0	0	0	0	0	4	25
	<b>Cluster Villages</b>	189	0	0	0	2	0	11	176
10	Bhargawan	31	0	0	0	0	0	1	30
	<b>Control Village</b>	31	0	0	0	0	0	1	30
	<b>Total</b>	349	0	0	0	2	0	25	322

7.102 In line with income level, the percentage of households within the expenditure range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above per month to total households is 94.43 with the break-up of 100.00 percent for adopted villages and 98.94 percent for cluster villages which further shows the affluence level of the area.

7.103 To **sum up** it may be mentioned that :-

- **The total number of household as per survey is 349.**
- **The average size of the family is 11 persons which is much higher than average family size of 5 persons.**
- **The preponderance of ST, SC households, the combined percentage of which is 87.97 is the typical feature of the area.**
- **All the households of the area are followers of Hindu religion.**
- **Agriculture is the main occupation of the area where 86.25 percent households are dependent on it.**
- **Activities like livestock, fishing and hunting as main occupations are completely missing. Only 5 households are engaged in forest produce collection work.**
- **In non of the villages secondary and tertiary sector occupations are being pursued as main occupation.**



- Agriculture as subsidiary occupation is not being pursued by any of the households in our area of study.
- Collection of minor forest produce is important source of subsidiary income as 97.13 percent households are engaged in this occupation
- Only four number of households are engaged in tertiary sector, mostly employed in private sector.
- Regarding income level, 91.40 percent households are within the average monthly income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above with similar trend for monthly expenditure that shows overall affluence status of the area.

## RESULTS OF THE SURVEY – MICRO DIMENSION

7.104 In this part of the Chapter 25 percent of the households have been identified for detailed enquiry which comes to 89 households. The 25% of 349 households comes to 87 but we have taken the figure of 89 due to unavoidable demographic particulars.

7.105 The table below shows the details;

Table No. 7.35  
Male – Female Distribution

S. No.	Name of the Village	No. of Families Selected	No. of Family Members	Male Total	Age, Male						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Khodari	5	29	12	0	6	1	1	2	2	0
2.	Devlaha	10	58	25	9	5	5	3	1	2	0
3.	Patnakalan	18	96	36	7	9	6	5	5	2	2
	<b>Adopted Villages</b>	33	183	73	16	20	12	9	8	6	2
4.	Kanpur	11	65	35	12	9	5	5	2	1	1
5.	Tangi	5	31	14	4	4	3	0	1	1	1
6.	Degarhot	8	51	28	9	7	3	5	2	0	2
7.	Umariha	6	35	20	6	6	1	4	1	1	1
8.	Patni	11	61	30	7	6	5	5	3	2	2
9.	Rahaniya	7	39	17	3	6	2	2	3	0	1
	<b>Cluster Villages</b>	48	282	144	41	38	19	21	12	5	8
10	Bhargawan	8	45	20	4	4	4	4	1	0	3
	<b>Control Village</b>	8	45	20	4	4	4	4	1	0	3
	<b>Total</b>	89	510	237	61	62	35	34	21	11	13

Table No. 7.35 [Contd...]  
Male – Female Distribution

S. No.	Name Of The Village	No. of Families Selected	No. of Family Members	Female Total	Age, Female						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	13	14	15	16	17	18	19	20
1.	Khodari	5	29	17	4	7	1	2	1	2	0
2.	Devlaha	10	58	33	16	6	5	2	2	1	1
3.	Patnakalan	18	96	60	16	24	10	5	4	0	1
	<b>Adopted Villages</b>	33	183	110	36	37	16	9	7	3	2
4.	Kanpur	11	65	30	7	8	5	4	4	1	1
5.	Tangi	5	31	17	8	1	3	2	2	0	1
6.	Degarhot	8	51	23	5	7	2	5	2	0	2
7.	Umariha	6	35	15	5	3	1	5	0	0	1
8.	Patni	11	61	31	14	3	6	4	2	2	0
9.	Rahaniya	7	39	22	5	9	2	3	2	0	1
	<b>Cluster Villages</b>	48	282	138	44	31	19	23	12	3	6
10	Bhargawan	8	45	25	7	8	3	3	1	0	3
	<b>Control Village</b>	8	45	25	7	8	3	3	1	0	3
	<b>Total</b>	89	510	273	87	76	38	35	20	6	11

**7.106** The above table shows that out of the total number of 510 number of persons from 89 households males constitute 46.47 percent while females constitute 53.53 percent higher than male percentage. The number of males within the age group of 20 to 60 years which represents labour force is 101 which is 42.62 percent to total number of 237 males is indicative of a positive fact that more persons are available for any productive work. These percentages are 41.95 in adopted villages and 39.58 in cluster villages which underline one basic point that in case of rapid development of agriculture through application of technology by the K.V.Ks. the possibility of absorbing the existing labour force will arrest the tendency of migration during lean season of agriculture. In case of females this percentage is 36.26 with break ups of 31.82 percent for adopted villages and 41.30 percent for cluster villages [more or less in line with male population] that again shows the availability of female labour – force for pursuance of any activity for family income augmentation along with engaging themselves in agriculture with their male counterpart. The percentage of dependent persons comprising of population within the age group of 0 to 10 years and 60 years and above who do not usually contribute towards family income is 31.22 in case of males and 35.50 percent in case females, is within a fair limit particularly for males which, ofcourse, is again a positive indicator.

#### EDUCATIONAL STATUS OF SAMPLE HOUSEHOLDS

7.107 Education and literacy are the twin prerequisites necessary for adoption of any sort of technology. The table below shows the educational status of sample households;

Table No. 7.36  
Educational Status

S. No.	Name of The Village	No. of Families Selected	No. of Family Members	Illiterate	Literate without going to school	Primary No.	Middle No.
1	2	3	4	5	6	7	8
1.	Khodari	5	29	8	0	13	8
2.	Devlaha	10	58	33	0	20	5
3.	Patnakalan	18	96	25	0	45	26
	<b>Adopted Villages</b>	33	183	66	0	78	39
4.	Kanpur	11	65	35	1	21	8
5.	Tangi	5	31	19	0	7	3
6.	Degarhot	8	51	27	0	14	9
7.	Umariha	6	35	18	0	11	5
8.	Patni	11	61	33	0	20	8
9.	Rahaniya	7	39	13	0	18	8
	<b>Cluster Villages</b>	48	282	145	1	91	41
10	Bhargawan	8	45	15	4	18	8
	<b>Control Village</b>	8	45	15	4	18	8
	<b>Total</b>	89	510	226	5	187	88

Table No. 7.36 [Contd...]  
Educational Status

S. No	Name of The Village	No. of Families Selected	No. of Family Members	High School No.	Higher School No.	Graduate No.	Post Graduate No.	Others
1	2	3	4	9	10	11	12	13
1.	Khodari	5	29	0	0	0	0	0
2.	Devlaha	10	58	0	0	0	0	0
3.	Patnakalan	18	96	0	0	0	0	0
	<b>Adopted Villages</b>	33	183	0	0	0	0	0
4.	Kanpur	11	65	0	0	0	0	0
5.	Tangi	5	31	2	0	0	0	0
6.	Degarhot	8	51	0	1	0	0	0
7.	Umariha	6	35	1	0	0	0	0
8.	Patni	11	61	0	0	0	0	0
9.	Rahaniya	7	39	0	0	0	0	0
	<b>Cluster Villages</b>	48	282	3	1	0	0	0
10	Bhargawan	8	45	0	0	0	0	0
	<b>Control Village</b>	8	45	0	0	0	0	0
	<b>Total</b>	89	510	3	1	0	0	0

7.108 The literacy percentage against the total of 510 persons is 55.69 which is lower than the district average of 65.12 percent and the state average of 64.11 percent as per census 2001. The percentage of children in levels of elementary education [primary + middle levels] is 53.92 which shows the fair impact of the programme of universalisation of Elementary Education over our area of study. The extent of higher education is far from being impressive mainly because of the lack of higher educational facilities in our area of study. **However, an overall educational status that emerges justifies the extent of absorption capacity of the people of the sample area to adopt technology regarding agriculture introduced particularly by the K.V.K.**

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS–MAIN OCCUPATION

7.109 Out of the total of 510 household members of our sample area, 98 persons are engaged in various main occupations which constitute 19.22 percent to total household members. In what follow an attempt has been made to analyse the information pertaining to main occupations.

### OCCUPATIONS RELATING TO AGRICULTURE

7.110 The table below shows the details;

Table No. 7.37  
Main Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Khodari	5	29	2	2	1	0
2.	Devlaha	10	58	9	1	0	0
3.	Patnakalan	18	96	11	6	1	0
	<b>Adopted Villages</b>	33	183	22	9	2	0
4.	Kanpur	11	65	3	8	0	0
5.	Tangi	5	31	3	2	0	0
6.	Degarhot	8	51	6	3	0	0
7.	Umariha	6	35	6	0	0	0
8.	Patni	11	61	6	5	0	0
9.	Rahaniya	7	39	3	3	1	0
	<b>Cluster Villages</b>	48	282	27	21	1	0
10	Bhargawan	8	45	5	3	0	0
	<b>Control Village</b>	8	45	5	3	0	0
	<b>Total</b>	89	510	54	33	3	0

7.111 The bulk of farming community from sample population is constituted by small and marginal farmers which is 17.06 percent to total of 510 family members. The complete absence of agriculture labour is a supportive factor.

### OCCUPATIONS ALLIED TO AGRICULTURE

7.112 The complete absence of persons pursuing occupation allied to agriculture is a negative factor that indicates dependence of agriculture for earning livelihood.

7.113 One of the mandates of K.V.K. is to encourage the activities allied to agriculture particularly that of animal husbandry and fisheries as alternate sources of rural income with immense advantage of reducing pressure on land. The above table shows the absence of such activities in our area of study. One of the greatest disadvantages of the rural scenario of Madhya Pradesh is the absence of such activities particularly in the far-flung areas that keep the rural inhabitants in a state of perpetual poverty.

### OCCUPATIONS RELATING TO SECONDARY AND TERTIARY SECTORS

7.114 The table below shows the details;

Table No. 7.38  
Main Occupation – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of families selected	No. of family members	Manufacturing of by-Product	Servicing and repairs	Construction work	Govt. Service	Service in Pvt. Sector
1	2	3	4	5	6	7	8	9
1.	Khodari	5	29	0	0	0	0	0
2.	Devlaha	10	58	0	0	2	0	0
3.	Patnakalan	18	96	0	0	0	0	0
	<b>Adopted Villages</b>	33	183	0	0	2	0	0
4.	Kanpur	11	65	0	0	2	0	0
5.	Tangi	5	31	0	0	0	0	0
6.	Degarhot	8	51	0	0	1	0	0
7.	Umariha	6	35	0	0	0	0	0
8.	Patni	11	61	0	0	2	0	0
9.	Rahaniya	7	39	1	0	0	0	0
	<b>Cluster Villages</b>	48	282	1	0	5	0	0
10	Bhargawan	8	45	0	0	0	0	0
	<b>Control Village</b>	8	45	0	0	0	0	0
	<b>Total</b>	89	510	1	0	7	0	0

7.115 The involvement of eight number of family members in secondary sector can hardly be termed as satisfactory. One of the important causes of rural poverty is the absence of secondary sector occupations in the rural areas.

#### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS IN SUBSIDIARY OCCUPATIONS

7.116 Out of total of 510 persons, 92 persons are engaged in various subsidiary occupations that constitute 18.03 percent to total household members of our sample area.

#### SUBSIDIARY OCCUPATIONS – AGRICULTURE

7.117 The table below shows the details;

Table No. 7.39  
Subsidiary Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Khodari	5	29	0	0	0	0
2.	Devlaha	10	58	0	0	1	0
3.	Patnakalan	18	96	1	0	1	0
	<b>Adopted Villages</b>	33	183	1	0	0	0
4.	Kanpur	11	65	0	0	0	0
5.	Tangi	5	31	0	0	0	0
6.	Degarhot	8	51	0	0	0	0
7.	Umariha	6	35	0	0	0	0
8.	Patni	11	61	0	0	0	0
9.	Rahaniya	7	39	0	0	0	0
	<b>Cluster Villages</b>	48	282	0	0	0	0
10	Bhargawan	8	45	0	0	0	0
	<b>Control Village</b>	8	45	0	0	0	0
	<b>Total</b>	89	510	1	0	1	0

7.118 The above table shows the involvement of only 2 person in agricultural occupations which is hardly a meaningful affair.

### **SUBSIDIARY OCCUPATIONS – ALLIED TO AGRICULTURE**

7.119 The table below shows the details;

Table No. 7.40  
Subsidiary Occupation – Allied to Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Minor Forest Produce Collection	Live stock activities	Fishing Activities	Hunting Activities	Mining and Quarrying
1	2	3	4	5	6	7	8	9
1.	Khodari	5	29	4	0	0	0	0
2.	Devlaha	10	58	10	0	0	0	0
3.	Patnakalan	18	96	17	0	0	0	0
	<b>Adopted Villages</b>	33	183	31	0	0	0	0
4.	Kanpur	11	65	11	0	0	0	0
5.	Tangi	5	31	5	0	0	0	0
6.	Degarhot	8	51	8	0	0	0	0
7.	Umariha	6	35	6	0	0	0	0
8.	Patni	11	61	11	0	0	0	0
9.	Rahaniya	7	39	5	0	0	0	0
	<b>Cluster Villages</b>	48	282	46	0	0	0	0
10	Bhargawan	8	45	8	0	0	0	0
	<b>Control Village</b>	8	45	8	0	0	0	0
	<b>Total</b>	89	510	85	0	0	0	0

7.120 The above table shows the involvement of 85 persons for the occupation of minor forest produce collection as subsidiary occupation which is 16.67 percent to total family members.

### **SUBSIDIARY OCCUPATION – SECONDARY AND TERTIARY SECTORS**

7.121 The table below shows the details;

Table No. 7.41  
Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of families selected	No. of family members	Manufacturing of by Product	Servicing and repairs	Construction work	Govt. Service	Service in Pvt. Sector
1	2	3	4	5	6	7	8	9
1.	Khodari	5	29	0	0	0	0	0
2.	Devlaha	10	58	0	0	0	0	0
3.	Patnakalan	18	96	0	0	2	0	0
	<b>Adopted Villages</b>	33	183	0	0	2	0	0
4.	Kanpur	11	65	0	0	0	0	0
5.	Tangi	5	31	0	0	0	0	0
6.	Degarhot	8	51	0	0	0	0	0
7.	Umariha	6	35	0	0	0	0	0
8.	Patni	11	61	0	0	0	0	0
9.	Rahaniya	7	39	0	0	3	0	0
	<b>Cluster Villages</b>	48	282	0	0	3	0	0
10	Bhargawan	8	45	0	0	0	0	0
	<b>Control Village</b>	8	45	0	0	0	0	0
	<b>Total</b>	89	510	0	0	5	0	0

7.122 Again there are only five persons engaged in secondary sector which is not a meaningful state of affairs.

#### AVERAGE MONTHLY INCOME

7.123 The table below shows the details;

Table No. 7.42  
Average Monthly Income

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 & above
1	2	3	4	5	6	7	8	9	10	11
1.	Khodari	5	29	24	0	0	0	0	0	5
2.	Devlaha	10	58	46	0	0	0	0	1	11
3.	Patnakalan	18	96	76	0	0	0	0	2	18
	<b>Adopted Villages</b>	33	183	146	0	0	0	0	3	34
4.	Kanpur	11	65	52	0	0	2	0	0	11
5.	Tangi	5	31	26	0	0	0	0	0	5
6.	Degarhot	8	51	42	0	0	0	0	1	8
7.	Umariha	6	35	29	0	0	0	0	0	6
8.	Patni	11	61	48	0	0	0	0	2	11
9.	Rahaniya	7	39	31	0	0	0	0	2	6
	<b>Cluster Villages</b>	48	282	228	0	0	2	0	0	0
10	Bhargawan	8	45	37	0	0	0	0	0	8
	<b>Control Village</b>	8	45	37	0	0	0	0	0	0
	<b>Total</b>	89	510	411	0	0	2	0	8	89

7.124 The above table shows that 80.59 percent family members against the 510 persons are within the average income range of below Rs. 500 per month which seems obvious as most of the farmers are from the category of small and marginal farmers.

## AVERAGE MONTHLY EXPENDITURE

7.125 The table shows the details;

Table No. 7.43  
Average Monthly Expenditure

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 and Above
1	2	3	4	5	6	7	8	9	10	11
1.	Khodari	5	29	24	0	0	0	0	0	5
2.	Devlaha	10	58	48	0	0	0	0	2	8
3.	Patnakalan	18	96	78	0	0	0	0	2	16
	<b>Adopted Villages</b>	33	183	150	0	0	0	0	4	29
4.	Kanpur	11	65	54	0	0	0	0	0	11
5.	Tangi	5	31	26	0	0	0	0	0	5
6.	Degarhot	8	51	43	0	0	0	0	1	7
7.	Umariha	6	35	29	0	0	0	0	0	6
8.	Patni	11	61	52	0	0	1	0	0	8
9.	Rahaniya	7	39	31	1	0	0	0	3	4
	<b>Cluster Villages</b>	48	282	235	1	0	1	0	0	0
10	Bhargawan	8	45	37	0	0	0	0	1	7
	<b>Control Village</b>	8	45	37	0	0	0	0	0	0
	<b>Total</b>	89	510	422	1	0	1	0	9	77

7.126 In line with information pertaining to income, 82.75 percent of family members are within the average expenditure range of Rs. 500.00 and below.

### To sum up

- The percentage of males within the age group of 20 to 60 years which represents labour force is 42.62 while that for females it is 36.26 which underline one fact that there exist a scope for absorption of agriculture related technology in our area of study.
- The percentage of dependent population is within fair limits for both males and females.
- The literacy percentage being 55.69 is not discouraging though lower than district and state average percentage literacy.
- The bulk of the farming community is from small and marginal farmers pursuing agriculture as main source of livelihood.
- The complete absence of persons in occupation allied to agriculture as main occupation is a definite drawback.
- The involvement of only eight number of family members in secondary sector as main occupation can hardly be termed as satisfactory.
- Regarding subsidiary occupation, the involvement of only two persons in agriculture occupation is hardly a meaningful conclusion.
- Involvement of 85 persons for the occupation of minor forest produce collection as a subsidiary occupation is a pleasant deviation.
- Regarding average monthly income, 80.59 percent family members are within the average income range of below Rs. 500.00 per month. Similar is the trend with average monthly expenditure.



## RESULTS OF SURVEY

### SUBJECTS OF TRAINING RECEIVED– ADOPTED AND CLUSTER VILLAGES

7.124 At the outset it is necessary to clarify the point that there are 81 number of families out of the total number of 89 families [91.01 percent] who took part in vocational training, front line demonstration and on farm testing which are the three basic mandates of K.V.K. Therefore, the total of responding families from vocational training, front line demonstration and on farm testing will not tally with the figure of 89 as from this basic figure the families participated in three fundamental activities. The entire analysis is based upon family approach as normally one member from each family from adopted and cluster villages where there is direct intervention of K.V.K. takes part in various training programmes. In what follows an attempt has been made to present the item wise details of various initiatives adopted by K.V.K. in the fields of vocational training, front line demonstrations and on farm testing.

### VOCATIONAL TRAINING

7.125 The table below shows the details;

Table No. 7.44  
Subjects of Training Received – Vocational Training.

S. No.	Name of Village	No. of Respondents	Subject on Which Training Received			
			Crop Prod Agronomy	Horticulture	Livestock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Khodari	5	5	5	5	0
2	Devlaha	10	10	10	0	0
3	Patnakalan	18	18	18	5	1
<b>I</b>	<b>Adopted Villages</b>	33	33	33	10	1
4	Kanpur	11	11	11	0	0
5	Tangi	5	5	5	0	0
6	Degarhot	8	8	6	0	1
7	Umariha	6	6	6	0	0
8	Patni	11	11	11	0	0
9	Rahaniya	7	7	5	0	0
<b>II</b>	<b>Cluster Villages</b>	48	48	44	0	1
	<b>Total All Villages</b>	81	81	77	10	2

Table No. 7.44 [Contd...]  
Subjects of Training Received – Vocational Training.

S. No.	Name of Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Water Shed Activities
1	2	8	9	10	11	12
1	Khodari	5	0	0	4	0
2	Devlaha	10	2	0	3	0
3	Patnakalan	17	2	1	6	0
<b>I</b>	<b>Adopted Villages</b>	32	4	1	13	0
4	Kanpur	11	2	0	2	0
5	Tangi	5	0	0	5	0
6	Degarhot	7	1	0	3	0
7	Umariha	6	0	0	2	0
8	Patni	10	2	0	2	0
9	Rahaniya	7	2	0	3	0
<b>II</b>	<b>Cluster Villages</b>	46	7	0	17	0
	<b>Total All Villages</b>	78	11	1	30	0

7.126 The cent percent response of family representatives for crop production seems obvious as the traditional crops are still in vogue in our area of study followed by home science activities by 78 families [96.30 percent to total of 81 responding families] that indicates the involvement mainly of women to adopt occupation for augmentation of family income. The participation of 77 and 30 families for subjects like horticulture and organic farming is an encouraging deviation. Complete lack of response for watershed activities is a sort of drawback for which K.V.K. scientists should make some efforts.

## FRONT LINE DEMONSTRATION

7.127 The main objective of the front line demonstration is to demonstrate newly released crop production and protection technologies and its management practices in the farmer's fields. However, in front line demonstrations, the interactions regarding home science activities, training of rural youth and all the other items as specified for vocational training are done to educate and support the farmers for augmentation of income. The table below shows the details;

Table No. 7.45  
Subjects of Training Received – Front Line Demonstration

S. No	Name of The Village	No. of Respondents	Subject On Which Training Received		
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry
1	2	3	4	5	6
1	Khodari	5	5	5	5
2	Devlaha	10	10	10	0
3	Patnakalan	10	9	0	5
I	<b>Adopted Villages</b>	25	24	15	10
4	Kanpur	4	4	0	0
5	Tangi	5	5	0	0
6	Degarhot	5	5	0	0
7	Umariha	6	6	0	0
8	Patni	3	3	0	0
9	Rahaniya	7	7	0	0
II	<b>Cluster Villages</b>	30	30	0	0
	<b>Total All Villages</b>	55	54	15	10

7.128 The above table shows that out of total number of 81 responding families 55 households i.e. 67.90 percent to total households have responded to front line demonstrations, out of which in agronomical activities, 54 family representatives have taken part in various vocational trainings, followed by horticulture related activities and livestock where 15 and 10 family representatives respectively have participated in vocational training organised by the K.V.K. **A total gap in participation in subjects like fisheries, home science, training of rural youth, agro-forestry, organic farming and watershed activities shows that cultivators are basically interested in enhancing their agriculture related productivity with basic understanding that once the income from agriculture is enhanced the other activities allied to agriculture will gradually develop. However, the efforts may be made by the K.V.K. scientists to arrange a few vocational training on livestock activities, agro forestry and watershed activities as these are very relevant occupations for rural economy.**

## ON FARM TESTING

7.129 In this practice the farmers participate in identifying problems and priorities and managing experiment and evaluating results. It is, therefore, an adaptive research with farmers perspective. The basic objective of on farm testing is to identify existing inputs or practices that might help to solve major problems of many farmers in a defined study area. The table below shows the details;

Table No. 7.46  
Subjects of Training Received – On Farm Testing

S. No.	Name of The Village	No. of Respondents	Subject On Which Training Received		
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry
1	2	3	4	5	6
1	Khodari	2	2	0	0
2	Devlaha	1	1	0	0
3	Patnakalan	3	3	0	0
I	<b>Adopted Villages</b>	6	6	0	0
4	Kanpur	1	1	0	0
5	Tangi	1	1	0	0
6	Degarhot	4	4	0	0
7	Umariha	0	0	0	0
8	Patni	1	1	0	0
9	Rahaniya	3	3	0	0
II	<b>Cluster Villages</b>	10	10	0	0
	<b>Total All Villages</b>	16	16	0	0

7.130 The above table shows that out of the total of 81 responding families, only 16 households [19.75%] have responded to the programme. A large participation is not also expected as only bigger cultivators can afford getting such activity organised on their field.

**7.131 A complete absence of participation in most of the subjects is visualized except on the subject of crop production where cent-percent participation has been reported.**

**7.132 The basic facts as revealed by above narration are that most of the cultivators are interested in training programmes relating to crop production, horticulture and home science which have direct relevance to their income. Livestock and poultry activities and fisheries are the areas where the villagers have hardly any interest.**

## IMPACT OF K.V.K.

7.133 In the foregoing paragraphs the analysis of subject wise training received was presented. In what follows an attempt has been made to present the impact of individual items of training in the broad categories of;

- Vocational Training
- Front Line Demonstration
- On Farm Testing

**both before and after training [BT, AT] situations. This is the most important part of the report that clearly indicates the impact of K.V.Ks. intervention on agronomy, horticulture, livestock and dairying, fisheries, home science etc.**

## VOCATIONAL TRAINING – AGRONOMY - CEREALS

7.134 The table below shows the impact of K.V.K's. intervention over cereal crops;

Table No. 7.47  
Agronomy – Cereals

S. No	Name of The Village	Wheat			Paddy			Maize		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Khodari	5	1560	3360	2	3900	5800	2	1000	1850
2	Devlaha	10	1660	3100	10	2830	3380	10	1030	1750
3	Patnakalan	18	2089	3583	16	3850	3210	14	1250	1871
I	<b>Adopted Villages</b>	33			28			26		
4	Kanpur	11	1827	3236	11	2900	3600	11	1264	1882
5	Tangi	5	1900	3320	5	1540	1760	5	1100	1480
6	Degarhot	8	2325	3188	3	1541	1798	0	0	0
7	Umariha	6	2733	3817	0	0	0	6	1417	2050
8	Patni	11	2218	3355	9	2300	3140	9	1311	1789
9	Rahaniya	7	2457	3457	7	1320	2020	2	1450	1800
II	<b>Cluster Villages</b>	48			35			33		
	<b>Total All Villages</b>	81			63			59		

**7.135 Regarding wheat crop** the responding family representatives are 81 which is cent percent to total of 81 number of responding families who have shown interest in vocational training regarding wheat crop. **The after training [A.T.] scenario is much better than before training situation wherein the per hectare yield ranged between 3100 kg per hectare for village Devlaha [adopted village] to 3817 kg per hectare for village Degarhot [cluster village] – obviously much higher than the district and State average per hectare yield rates of 1305 and 1867 kg respectively. The above fact clearly indicates the positive effects of vocational training imparted by the K.V.K. over the wheat crop.**

7.136 Regarding paddy crop the per-hectare yield in after training situation for every village is higher than before training situation that ranged between 1760 kg for village Tangi [cluster village] to 5800 kg for villge Khodari [adopted village] much higher than district and state average figures of 1305 kg and 1867 kg respectively.

7.137 Regarding maize, 50 number of families [72.84 percent] have participated in the vocational training programme with yield rates in A.T. situations ranging between 1480 kg per hectare for village Tangi [cluster village] to 2050 kg in Umariha [cluster village], higher than district average of 1344 kg. The positive impact of the K.V.Ks. intervention is, thus, obvious.

## VOCATIONAL TRAINING – AGRONOMY – PULSES

7.138 The table below shows the details

Table No. 7.48  
Agronomy – Pulses

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Gram			Arhar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Khodari	5	2801	3010	2	750	1300
2	Devlaha	10	2010	3941	10	700	1080
3	Patnakalan	12	1280	1680	8	763	1075
I	<b>Adopted Village</b>	27			20		
4	Kanpur	2	1500	2100	4	850	1150
5	Tangi	5	2900	3914	5	800	1000
6	Degarhot	8	2141	3180	3	733	1100
7	Umariha	6	2789	3547	3	667	1033
8	Patni	3	2400	3000	3	767	1000
9	Rahaniya	6	2410	3784	3	867	1433
II	<b>Cluster Village</b>	30			21		
	<b>Total All Villages</b>	57			41		

7.139 In pulses group gram and arhar are the important crops of Satna district. **Regarding Gram**, against the total of 81 households, 57 households [70.37 percent] have participated in vocational training. **The after training performance that resulted in per hectare yield ranging between 1680 kg for village Patnakalan [adopted village] to 3941 kg for village Devlaha [adopted village] is much higher than district and State average figures of 698 kg and 932 kg per hectare respectively.**

7.140 Regarding Arhar crop, 41 households [50.61 percent] have responded to vocational training which is reflected in enhanced productivity **in after training situations that ranged between 1000 kg per hectare for villages Tangi and Patni [both cluster village] to 1433 kg for village Rahaniya [cluster village] far above than district and state average productivity of 501 kg and 825 kg per hectare respectively.**

#### VOCATIONAL TRAINING – AGRONOMY – OIL SEEDS

7.141 The table below shows the details;

Table No. 7.49  
Agronomy – Oil Seeds – Mustard

S. No.	Name of The Village	Yield Per- Hectare - Kg.		
		Mustared		
		No. of Respondents	BT	AT
1	2	3	4	5
1	Khodari	5	560	1140
2	Devlaha	7	529	986
3	Patnakalan	9	711	1056
I	<b>Adopted Village</b>	21		
4	Kanpur	3	533	1000
5	Tangi	5	500	964
6	Degarhot	5	580	1100
7	Umariha	5	740	1240
8	Patni	3	700	967
9	Rahaniya	4	600	1075
II	<b>Cluster Village</b>	25		
	<b>Total All Villages</b>	46		

7.142 **Regarding Mustard crop 46 households [56.79 percent] took part in vocational training programme resulting in the yield rate ranging between 967 kg for village Patni [cluster village] to 1240 kg for village Umariha [cluster village] in after training situation which is higher than district and state average figures of 385 kg and 1009 kg per hectare respectively.**

7.143 The participation of households for receiving training on crops like lentil, jowar, soybean, sugarcane, linseed is nil that clearly indicates the lack of interest of cultivators of Satna district in pursuing the cultivation of these crops. The impact of vocational training, thus, will not be visible over such crops.

## HORTICULTURE

7.144 Horticulture crops are important from the view points of employment generation, checking of soil erosion and providing high density green cover to the soil. Being tough, many of these crops may be successfully grown on waste land not suitable for traditional crop cultivation. The table below shows the status of horticulture crop production in the sample area of our study;

Table No. 7.50  
Horticulture Crops

S.No.	Name of The Village	Yield Per- Hectare - Quintal					
		Potato			Onion		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Khodari	5	0	200	3	0	249
2	Devlaha	10	0	204	0	0	0
3	Patnakalan	25	21	198	12	150	257
I	<b>Adopted Villages</b>	40			15		
4	Kanpur	3	0	197	0	0	0
5	Tangi	5	0	211	5	0	211
6	Degarhot	5	148	204	3	0	271
7	Umariha	6	157	248	3	0	218
8	Patni	6	0	201	0	0	0
9	Rahaniya	12	203	250	2	350	0
II	<b>Cluster Villages</b>	37			13		
	<b>Total All Villages</b>	77			28		

Table No. 7.50 [Contd...]

## Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal					
		Tomato			Brinjal		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Khodari	5	0	164	5	0	235
2	Devlaha	10	0	196	0	0	0
3	Patnakalan	10	14	171	9	100	159
I	<b>Adopted Villages</b>	25			14		
4	Kanpur	6	0	209	5	0	103
5	Tangi	5	0	187	3	0	286
6	Degarhot	0	0	0	2	190	190
7	Umariha	3	0	170	4	0	310
8	Patni	3	0	172	5	0	101
9	Rahaniya	2	0	210	1	140	190
II	<b>Cluster Villages</b>	19			20		
	<b>Total All Villages</b>	44			34		

Table No. 7.50 [Contd...]

## Horticulture Crops

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Papaya			Chilly			Bhindi		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	15	16	17	18	19	20	21	22	23
1	Khodari	0	0	0	5	0	134	2	0	180
2	Devlaha	0	0	0	3	0	208	2	0	190
3	Patnakalan	0	0	0	10	0	170	10	60	231
I	<b>Adopted Villages</b>	0	0		18			14		
4	Kanpur	0	0	0	1	0	200	1	0	100
5	Tangi	0	0	0	5	0	215	0	0	0
6	Degarhot	0	0	0	0	0	0	0	0	0
7	Umariha	0	0	0	1	0	90	0	0	0
8	Patni	1	0	70	3	0	183	3	0	247
9	Rahaniya	0	0	0	1	0	150	0	0	0
II	<b>Cluster Villages</b>	1	0		11			4		
	<b>Total All Villages</b>	1	0		29			18		

7.145 The above table shows that in case of **Potato** 59 number of families have participated in the vocational training which is 72.84 percent to total of 81 responding families. For every village the per-hectare yield in after training situation is higher than before training conditions that ranged between 197 quintal per hectare for village Kanpur [cluster village] to 250 quintal per hectare for village Rahaniya [cluster village]. These yield rates are much higher than the State average figure of 119 quintal per hectare. The positive impact of the efforts of the K.V.K., is, thus, obvious.

7.146 Regarding **Onion**, 28 number of households [34.57 percent] have responded to the vocational training, resulting in enhanced per-hectare yield in after training situations as compared to before training conditions that ranged between 211 quintal per-hectare for village Tangi [cluster village] to 271 quintal per hectare for village Degarhot [cluster village] which are much higher than State average figure of 140 quintal per hectare.

- 7.147 **Tomato** is yet another crop which is gradually picking-up at Satna as 44 families have participated in the vocational training constituting 54.32 percent to total of 81 families. The yield rates in after training conditions ranged between 164 quintal per hectare for village Khodari [adopted village] to 210 quintal per-hectare for village Rahaniya [cluster village].
- 7.148 **Brinjal** too is a crop getting popular at Satna as 34 number of families [41.98 percent] have shown interest in training programme, the positive effects of which have been reflected in the form of enhanced per-hectare yield in after training situations as compared to before training conditions that ranged between 101 quintal per-hectare for village Patni [cluster village] to 310 quintal per-hectare for village Umriha [cluster village].
- 7.149 **For Chilly crop**, 29 families have taken part in vocational training with yield rates that ranged between 90 quintal per hectare is village Umariha [cluster village] to 215 quintal per hectare in village Tangi [cluster village] in after training situation.
- 7.150 Similarly for **Bhindi crop**, 18 number of families [22.22 percent] have taken part in vocational training programme resulting in enhanced productivity in after training situations as compared to before training status that ranged between 100 quintal per-hectare for village Kanpur [cluster village] to 247 quintal per-hectare for village Patni [cluster village].
- 7.151 As regards **Papaya**, only one household from village Patni [cluster village] has taken part in the vocational training programme resulting in output of 70 quintal per hectare in after training conditions.
- 7.152 **For crops like Cucerbites, Spices, Mango, Banana and Citrus, no vocational training programmes have been organised as the cultivators were not interested in producing such crops.**

## VOCATIONAL TRAINING – LIVESTOCK AND DAIRY

- 7.153 Though these functions are important from the view points of both income augmentation and diversification of agriculture for reducing pressure on land in rural areas but in general such functions are not taken-up on viable scale with proper organizational skill as is evident from the information contained in the following table;

Table No. 7.51

### Live Stock and Dairying

S. No	Name of The Village	Improved feeding management		
		No. of Respondents	Yes	No
1	2	9	10	11
1	Khodari	5	5	0
2	Devlaha	0	0	0
3	Patnakalan	5	5	0
I	<b>Adopted Villages</b>	10	0	0
4	Kanpur	0	0	0
5	Tangi	0	0	0
6	Degarhot	0	0	0
7	Umariha	0	0	0
8	Patni	0	0	0
9	Rahaniya	0	0	0
II	<b>Cluster Villages</b>	0	0	0
	<b>Total All Villages</b>	10	10	0



7.154 Only for feeding management 10 number of households have given a positive response and adopted the practice.

### VOCATIONAL TRAINING – POULTRY

7.155 Poultry is yet another activity which is relevant to rural economy for augmentation of family income. The table below shows the details;

Table No. 7.52  
Poultry Activities

S. No	Name of The Village	Improved breed			Improved caging system		
		No. of Respondents	BT	AT	No. of Respondents	Yes	No
1	2	3	4	5	6	7	8
1	Khodari	5	0	17	5	5	
2	Devlaha	0	0	0	0	0	
3	Patnakalan	5	0	21	5	5	
I	<b>Adopted Village</b>	10	0	38	10	10	
4	Kanpur	0	0	0	0	0	
5	Tangi	0	0	0	0	0	
6	Degarhot	0	0	0	0	0	
7	Umariha	0	0	0	0	0	
8	Patni	0	0	0	0	0	
9	Rahaniya	0	0	0	0	0	
II	<b>Cluster Village</b>	0			0	0	
	<b>Total All Villages</b>	10			10	10	

Table No. 7.52 [Contd...]  
Poultry Activities

S. No	Name of The Village	Improved feed management			Vaccination of bird		
		No. of Respondents	Yes	No	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Khodari	5	5	0	5	0	20
2	Devlaha	0	0	0	0	0	0
3	Patnakalan	5	0	0	5	21	4
I	<b>Adopted Village</b>	10	0	0	10		
4	Kanpur	0	0	0	0	0	0
5	Tangi	0	0	0	0	0	0
6	Degarhot	0	0	0	0	0	0
7	Umariha	0	0	0	0	0	0
8	Patni	0	0	0	0	0	0
9	Rahaniya	0	0	0	0	0	0
II	<b>Cluster Village</b>	0	0	0	0		
	<b>Total All Villages</b>	10	10	0	10		

7.156 For improved breeding practices ten number of households from villages Khodari and Patnakalan have participated in vocational training with production of 17 and 21 number of improved breed in after training situation.

7.157 Similarly for improved caging system 10 number of households have taken part in vocational training who have followed the practice.

7.158 The training programme for improved feed management has been attended by 10 number of households.

7.159 Regarding vaccination of birds 10 number of households have attended the training programme with not much tangible results.

### VOCATIONAL TRAINING – HOME SCIENCE

7.160 Vocational training in Home Science activities like toy making, preparation of pickles and jute items, preparation of papad/badi/jam/jelly etc. are important from both income support and employment generation point of views engaging women and old people in rural areas. The table below shows the details;

Table No. 7.53  
Home Science Activities

S. No	Name of The Village	Pickle, Kg.			Bakery, Kg.			Papad/Badi/Jam/Jelly, Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Khodari	5	0	19	0	0	0	0	0	0
2	Devlaha	10	0	31	0	0	0	10	0	26
3	Patnakalan	17	5	57	2	0	3	9	0	14
I	<b>Adopted Villages</b>	32	5	107	2	0	3	19	0	40
4	Kanpur	11	4	30	0	0	0	11	0	21
5	Tangi	5	0	23	0	0	0	5	0	16
6	Degarhot	8	7	41	0	0	0	0	0	0
7	Umariha	6	5	26	0	0	0	0	0	0
8	Patni	10	0	29	0	0	0	10	0	29
9	Rahaniya	6	1	25	0	0	0	0	0	0
II	<b>Cluster Villages</b>	46	17	174	0	0	0	26	0	66
	<b>Total All Villages</b>	78	22	281	2	0	3	45	0	106

7.161 Preparation of **Pickles** is an item getting popular in rural areas as 78 number of family representatives have taken part in the vocational training constituting 96.30 percent of total of 81 responding families with production of 281 kgs of pickle in after training situation as compared to 22 kgs of pickle in before training conditions. The impact of K.V.Ks. effort is clearly visible.

7.162 Regarding preparation of **bakery items** which is not very popular in our sample area of study, only 2 number of households from village Patnakalan [adopted village] have taken part in vocational training **with 3 kgs of production in after training situation that clearly shows the lack of interest of sample household in pursuing such occupation.**

7.163 **Regarding preparation of paper/badi/jam/jelly etc.,** which is becoming popular activity in our study mainly due to portability of the product, 45 household [55.56 percent] have taken part in vocational training organised by the K.V.K. with production of 106 kg in after training situation as compared to nil production in before training conditions **that underlines the positive impact of the K.V.Ks. efforts.**

## VOCATIONAL TRAINING – TRAINING OF RURAL YOUTH

7.164 Training of rural youth, though do not have any direct relevance to transfer of agriculture related technology, but has immense impact on employment generation. The table below shows the details;

Table No. 7.54  
Training of Rural Youth

S. No	Name of The Village	Motor binding			Engine repair			Other activities		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Khodari	0	0	0	0	0	0	0	0	0
2	Devlaha	0	0	0	0	0	0	2	0	2
3	Patnakalan	0	0	0	0	0	0	1	0	1
I	<b>Adopted Villages</b>	0	0	0	0	0	0	3	0	3
4	Kanpur	0	0	0	0	0	0	2	0	2
5	Tangi	0	0	0	0	0	0	0	0	0
6	Degarhot	0	0	0	0	0	0	1	0	1
7	Umariha	0	0	0	0	0	0	0	0	0
8	Patni	0	0	0	2	0	2	0	0	0
9	Rahaniya	1	0	1	0	0	0	1	0	1
II	<b>Cluster Villages</b>	1	0	1	2	0	2	4	0	4
	<b>Total All Villages</b>	1	0	1	2	0	2	7	0	7

7.165 Regarding **motor binding** activity one family member from village Rahaniya [cluster village] has taken part in the training with placement.

7.166 Similarly for tractor, diesel engine repair two number of family members from village Patni [cluster village] have undergone the training and got placement.

7.167 Regarding other activities 7 number of family members have undergone training and got placement in various jobs.

7.168 The impact of K.V.Ks. efforts regarding training of rural youth is quite satisfactory. Though the figures seem inadequate but in view of the requirement of such services in rural areas the number of trained persons is sufficient.

## VOCATIONAL TRAINING – ORGANIC FARMING

7.169 The table below shows the details;

Table No. 7.55  
Organic Farming

S. No.	Name of The Village	Bio-Fertilizer Kg.		
		No. of Respondents	BT	AT
1	2	6	7	8
1	Khodari	4	0	95
2	Devlaha	3	0	85
3	Patnakalan	6	0	180
I	<b>Adopted Village</b>	13	0	360
4	Kanpur	3	0	88
5	Tangi	4	0	125
6	Degarhot	3	0	75
7	Umariha	2	0	50
8	Patni	2	0	55
9	Rahaniya	4	0	105
II	<b>Cluster Village</b>	18	0	498
	<b>Total All Villages</b>	31	0	858

7.170 The practice of organic farming is gradually picking up in our area of study as 31 number of households have participated in the training programme relating to **Bio-fertilizer** with production of 858 kgs of bio-fertilizer in after training situation as compared to nil performance in before training conditions.

7.171 **No vocational training has been organised on subjects like fishery development, agro forestry and watershed activities which are important functions from the view point of income augmentation in rural areas. The impact of vocational training over such activities will not visible.**

7.172 **In the following paragraphs** an attempt has been made to sum-up the efforts of vocational training imparted by the K.V.K.

- **Regarding the yield per hectare both for agronomical and horticultural crops, the after training situation is better than before training conditions that clearly shows the positive impact of vocational training imparted by the K.V.K.**
- **Regarding wheat crop cent-percent responding families have taken part in vocational training with yield rates higher than district and state level average productivity.**
- **Similarly for paddy crop the productivity is much higher than average productivity levels prevailing at district and in state.**
- **Regarding Gram crop 70.37 percent family representatives have taken part in vocational training with much higher yield rates as compared to district and state average productivity.**
- **Regarding Arhar 50.61 percent households have responded to vocational training with yield rates far above the district and state average productivity.**
- **Regarding Mustard 56.79 percent households have taken part in vocational training with higher level of productivity as compared to per hectare yields prevailing at district and in the state.**
- **Regarding horticulture crops the vocational training have been organised for crops like potato, onion, tomato, brinjal, chilly, bhindi and papaya with rate of participation of 72.84 percent, 34.57 percent, 54.32 percent, 41.98 percent, 35.80 percent, 22.22 percent and 1.23 percent to total of 81 responding families respectively which no doubt is a very bright picture indicating the desire of the farming community of our sample area to deviate from producing only traditional crops.**

- As regards livestock and dairy, 12.35 percent households have participated in vocational training on improved feeding management. The response is encouraging as in case of other K.V.Ks. the participation for this subject is either nil or negligible.
  - Regarding poultry 12.35 percent households have participated in the vocational training pertaining to breeding practices, improved caging system, improved feed management and vaccination of birds which are positive deviations from other K.V.Ks. where the response to this activity is, generally, nil.
  - Response to home science activities is also encouraging particularly for items like preparation of pickles and preparation of papad/bari/jam/jelly etc. wherein 96.30 percent and 55.56 percent households respectively have taken part in vocational training with substantial physical output.
  - Organic farming is yet another field wherein 38.27 percent households have taken part in subject like preparation of bio-fertilizer with tangible physical result.
- 7.173 Vocational training has not been organised on subjects like fishery development, agro-forestry and watershed activities. The impact of vocational training over such activities will not be visible.

### FRONT LINE DEMONSTRATION – AGRONOMY CEREALS

7.174 Front line demonstrations [FLD] are organized on farmer's field with the result the response is bound to be low as compared to vocational training. The table below shows the impact of front line demonstrations on cereal crops.

Table No. 7.56  
Agronomy – Cereals

S. No	Name of The Village	Wheat			Paddy			Maize		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Khodari	2	1100	3800	0	0	0	0	0	0
2	Devlaha	10	1660	3200	0	0	0	0	0	0
3	Patnakalan	7	2100	3557	0	0	0	0	0	0
I	<b>Adopted Villages</b>	19			0			0	0	0
4	Kanpur	4	2000	3300	0	0	0	0	0	0
5	Tangi	5	1680	3320	0	0	0	0	0	0
6	Degarhot	2	3050	3900	0	0	0	0	0	0
7	Umariha	2	2850	4000	0	0	0	1	1400	2600
8	Patni	3	2467	3533	0	0	0	0	0	0
9	Rahaniya	2	2900	3800	1	2000	3500	0	0	0
II	<b>Cluster Villages</b>	18			1			1		
	<b>Total All Villages</b>	37			1			1		

7.175 The front line demonstrations for the **wheat crop** have been organized on the fields of 37 cultivators which is 45.68 percent to total of 81 responding families. The per hectare yield in after training situation is much higher than before training conditions that ranged between 3200 kg. per hectare for the village Devlaha [adopted village] to 4000.00 kg per hectare for village Umariha [cluster village] far in excess of district average of 1305 kg and state average of 1867 kg. The positive impact of the efforts of K.V.K. is clearly visible.

7.176 Regarding paddy crop only one F.L.D. has been organised for village Rahaniya [cluster village] with 3500 kg per hectare in after training situation which is much higher than district and state average productivities of 1000 kg and 1058 kg respectively.

7.177 Regarding **Maize crop** only one demonstration has been organised in village Umariha [cluster village] with per hectare yield of 2600 kg in after training situation which is not only higher than the productivity in before training situation but in excess of district and state average productivities of 1344 kg and 2072 kg per hectare respectively. **However matching to vocational training, a few more F.L.Ds. should have been organised.**

**7.178 No F.L.Ds. have been organised for crop like Jowar which is usually grown by poor cultivators.**

## AGRONOMY - PULSES

7.179 The table below shows the details;

Table No. 7.57  
Agronomy – Pulses

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Gram			Arhar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Khodari	2	1500	2900	1	800	1200
2	Devlaha	2	1400	2200	2	750	1100
3	Patnakalan	1	1400	1800	1	900	1200
I	<b>Adopted Villages</b>	5			4		
4	Kanpur	0	0	0	1	1000	1100
5	Tangi	2	1100	2400	0	0	0
6	Degarhot	1	800	1500	1	700	1200
7	Umariha	2	1900	3600	0	0	0
8	Patni	1	700	1000	0	0	0
9	Rahaniya	1	700	1600	1	700	1400
II	<b>Cluster Villages</b>	7			3		
	<b>Total All Villages</b>	12			7		

7.180 **Gram being** one of the important crops of Satna district, 12 number of front line demonstration [F.L.Ds.] have been organised which is 14.81 percent to total of 81 responding families with better performance in after training situation as compared to before training conditions. The per hectare yield in after training situation ranged between 1600 Kg for Patni [cluster village] to 3600 kg for Umariha [cluster village] which are higher than the district average productivity figure of 698 kg and state level figure of 932 kg.

**7.181 Regarding Arhar crop** only 7 number of F.L.Ds. have been organised resulting in crop productivity which is higher in after training situation as compared to before training conditions and far in excess of average district and state level productivity per hectare accounting for 501 kg and 825 kg respectively.

## FLD – AGRONOMY – OIL SEEDS

7.182 The table below shows the details;

Table No. 7.58  
Agronomy – Oil Seeds - Mustard

Sl. No.	Name of the Village	Yield Per- Hectare - Kg.		
		No. of Respondents	BT	AT
1	Khodari	2	600	1300
2	Devlaha	0	0	0
3	Patnakalan	1	900	1408
<b>I</b>	<b>Adopted Villages</b>	3		
4	Kanpur	0	0	0
5	Tangi	0	0	0
6	Degarhot	1	700	1400
7	Umariha	1	900	1400
8	Patni	0	0	0
9	Rahaniya	2	600	1350
<b>II</b>	<b>Cluster Villages</b>	4		
	<b>Total All Villages</b>	7		

7.183 Mustard being one of the important crops of district Satna 7 number of F.L.Ds. have been organised. The yield per hectare in after training situation is much higher than before training conditions that ranged between 1300 kg per hectare for village Khodari [adopted village] to 1408 kg per hectare for village Patnakalan [adopted village] higher than both district and state average productivity of 385 kg and 1009 kg respectively.

No FLDs have been organized for crops like soybean, cotton, sugarcane, linseed with the result the crops will not be visible.

## FLD – HORTICULTURE

7.184 The table below shows the details;

Table No. 7.59  
Horticulture Crops

S. No	Name of The Village									
		Tomato			Brinjal			Chilli		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Khodari	3	0	180	2	0	311	1	0	160
2	Devlaha	10	0	196	0	0	0	0	0	0
3	Patnakalan	0	0	0	0	0	0	0	0	0
<b>I</b>	<b>Adopted Villages</b>	13			2			1		
4	Kanpur	0	0	0	0	0	0	0	0	0
5	Tangi	0	0	0	0	0	0	0	0	0
6	Degarhot	0	0	0	0	0	0	0	0	0
7	Umariha	0	0	0	0	0	0	0	0	0
8	Patni	0	0	0	0	0	0	0	0	0
9	Rahaniya	0	0	0	0	0	0	0	0	0
<b>II</b>	<b>Cluster Villages</b>	0			0			0		
	<b>Total All Villages</b>	13			2			1		

- 7.185 **Tomato** is one of the horticultural crops which is picking-up in Satna district as is evident from the fact that 13 number of F.L.Ds. have been organised, all in adopted villages with productivity in after training situation higher than before training situation, having range distribution of 180 kg per hectare in village Khodari to 196 kg per hectare for village Devlaha. A few F.L.Ds. should have also been organised in cluster villages as well.
- 7.186 **Regarding Brinjal** crop, 2 number of F.L.Ds. have been organised in adopted villages with better performance in after training situations as compared to before training conditions. However, a few F.L.Ds. should have been organised for cluster villages as well for wider positive impact.
- 7.187 Regarding **Chilly crop** only 1 F.L.D. has been organised in adopted village Khodari with yield rates higher in after training situation as compared to nil production in before training conditions.
- 7.188 No F.L.Ds. have been organised for crops like Potato, Onion, Bhindi, Cucurbits, Spices, Mango, Banana, Papaya and Citrus crops. Potato and Onion being important crops from demand point of view, a few number of F.L.Ds. should have been organised. More over horticulture crops give income support to farming families with ready market that call for more training emphasis for these crops along with organisation of F.L.Ds.**

#### F.L.D. – POULTRY

7.189 The table below shows the details;

Table No. 7.60  
Poultry Development

S. No	Name of The Village						
		Improved Breed			Improved caging system		
		No. of Respondents	BT	AT	No. of Respondents	Yes	No
1	Khodari	4	0	16	4	4	
2	Devlaha	0	0	0	0	0	0
3	Patnakalan	4			4	4	
I	<b>Adopted Villages</b>	8			8		
4	Kanpur	0	0	0	0	0	0
5	Tangi	0	0	0	0	0	0
6	Degarhot	0	0	0	0	0	0
7	Umariha	0	0	0	0	0	0
8	Patni	0	0	0	0	0	0
9	Rahaniya	0	0	0	0	0	0
II	<b>Cluster Villages</b>	0			0		
	<b>Total All Villages</b>	8			8	8	



Table No. 7.60 [Contd...]  
Poultry Development

S. No	Name of The Village	Poultry Development					
		Improved Feed Management			Vaccination		
		No. of Respondents	Yes	No	No. of Respondents	Yes	No
1	Khodari	0	0	0	0	0	0
2	Devlaha	0	0	0	0	0	0
3	Patnakalan	4	4	0	4	12	4
I	<b>Adopted Villages</b>	4	4	0	4		
4	Kanpur	0	0	0	0	0	0
5	Tangi	0	0	0	0	0	0
6	Degarhot	0	0	0	0	0	0
7	Umaraha	0	0	0	0	0	0
8	Patni	0	0	0	0	0	0
9	Rahaniya	0	0	0	0	0	0
II	<b>Cluster Villages</b>	0	0	0	0		
	<b>Total All Villages</b>	4	4	0	4		

7.190 The above table shows that regarding improved breeding practices 8 number of F.L.Ds. have been organised [all in adopted villages] with production of 32 number of improved breed species in after training situation.

7.191 Regarding improved caging practices 8 number of families have participated in the F.L.D. that comes to 9.88 percent to total of 81 responding households.

7.192 Similarly for improved feed management four number of F.L.Ds. have been organised at village Patnakalan [adopted village which is 4.94 percent to total number of 81 responding families.

Though performance over vaccination of birds is not impressive as only 4 number of households [4.94 percent] have taken part in F.L.D. with vaccination of only 12 birds in after training situation but a beginning has been done that in due course of time will get momentum.

**7.193 Since in all the ten identified villeges the proportion of S.T. population is substantial [please refer table no. 7.8] who have traditional knowledge about the up-keep of poultry, a more coordinated efforts by K.V.K. may lead to better performance regarding poultry which will reflect upon enhanced income levels**

**7.194 Regarding subjects like livestock and dairying, fisheries development, agro-forestry, organic farming and watershed activities no F.L.Ds. have been organised. All the above mentioned activities are important for any rural economy. Particularly the subjects like livestock, agro forestry and watershed activities are important from the view points of income augmentation and enhancement of agriculture production. F.L.Ds, therefore, should have been organised for such activities.**

**7.195 To sum-up**

- **Front Line Demonstrations organised in our area of study have lead to enhancement in productivity of most of agronomical and horticultural crops in after training situations as compared to before training situations which show the positive impact of K.V.Ks. efforts.**

- In case of wheat 37 number of F.L.Ds. have been organised which is 45.68 percent to total of 81 responding families with yield per hectare far in excess of average productivity of district and state levels.
- Similarly for paddy and maize crops one F.L.D. each have been organised with higher yield rates as compared to district and state level averages.
- Gram being one of the important crops of Satna district 12 number of F.L.Ds. have been organised which is 14.81 percent to total of 81 number of responding families with higher productivity as compared to prevailing rates at both district and state levels.
- Similarly for Arhar crop 7 number of F.L.Ds. have been organised [8.64 percent] with per hectare yield for in excess of average district and state level productivity.
- Mustard being one of the important crops of district Satna 7 number of F.L.Ds. have been organised with yield per hectare higher than the average productivity prevailing at district and state levels.
- As regards horticulture crops like tomato, brinjal and chilly the number of F.L.Ds. organised are 13,2 and 1 respectively with better performance in after training conditions as compared to before training situations.
- Since in all the ten identified villages there is preponderance of tribal population, poultry activities are in ascendency which requires both technical and financial support from the government.
- Since no F.L.Ds. have been organised on subjects like livestock and dairying, fisheries development, agro forestry, organic farming and watershed activities the impact of F.L.D. for these subjects will not be visible.

#### ON FARM TESTING [OFT] - CEREALS

7.196 In case of On Farm Testing, recommended new technologies are tested on farmer's fields leading to the solution of group of farming problems. The extent of response is bound to be low as the new technologies are always limited in numbers.

7.197 The table below shows the details;

Table No. 7.61  
Cereal Crops

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Paddy		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Khodari	1	2200	3800	0	0	0
2	Devlaha	1	2200	3300	0	0	0
3	Patnakalan	2	1000	3900	0	0	0
I	<b>Adopted Village</b>	4			0		
4	Kanpur	1	2000	3400	0	0	0
5	Tangi	1	2200	3400	0	0	0
6	Degarhot	1	3100	4000	0	0	0
7	Umaraha	0	0	0	0	0	0
8	Patni	1	2400	4008	0	0	0
9	Rahaniya	1	3000	4009	1	2000	3800
II	<b>Cluster Village</b>	5			1		
	<b>Total All Villages</b>	9			1		

7.198 In case of Wheat, 8 number of on farm testing activities have been organised with substantial yield per hectare in after training situation that ranged between 3300 kg per hectare for village Devlaha to 4009 kg per-hectare for village Rahaniya which are much higher than the district average per hectare productivity of 1305 kg and state average figure of 1867 kg.

7.199 Regarding paddy crop only one O.F.T. has been organised in village Rahaniya [cluster village] with yield rates higher in after training situation as compared to prevailing district level average productivity of 1000 Kg and state level average productivity of 1058 Kg.

7.200 In non other cereal crops like Maize and Jowar the O.F.Ts. have been organised.

### ON FARM TESTING – PULSES CROP

7.201 The table below shows the details;

Table No. 7.62  
Pulses Crop

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Gram			Arhar		
		No. of Respon- dents	BT	AT	No. of Respon- dents	BT	AT
1	Khodari	0	0	0	0	0	0
2	Devlaha	0	0	0	0	0	0
3	Patnakalan	0	0	0	0	0	0
I	<b>Adopted Villages</b>	0			0		
4	Kanpur	0	0	0	0	0	0
5	Tangi	0	0	0	0	0	0
6	Degarhot	1	800	1500	1	700	1200
7	Umariha	0	0	0	0	0	0
8	Patni	0	0	0	0	0	0
9	Rahaniya	1	700	1600	0	0	0
II	<b>Cluster Villages</b>	2			1		
	<b>Total All Villages</b>	2			1		

7.202 Gram being one of the important crops of Satna district, 2 O.F.Ts. have been organised [all in cluster villages] with productivity ranging between 1500 kg per hectare for village Degarhot to 1600 kg for village Rahaniya in after training situations which are higher than before training conditions and far in excess of district average productivity of 698 kg per hectare and state average productivity of 932 kg per hectare.

7.203 Similarly, for Arhar crop one number of O.F.T. has been organised in village Degarhat with yields per hectare in after training situations which are far in excess of district level and state level per hectare yields of 501 kg and 825 kg respectively.

### ON FARM TESTING – OIL SEED CROP

7.204 The table below shows the details;

Table No. 7.63  
Oil Seed Crop - Mustard

Sl. No.	Name of the Village	Yield Per- Hectare - Kg.		
		No. of Respondents	BT	AT
1	Khodari	1	700	1400
2	Devlaha	0	0	0
3	Patnakalan	1	900	1400
<b>I</b>	<b>Adopted Villages</b>	2		
4	Kanpur	0	0	0
5	Tangi	0	0	0
6	Degarhot	1	700	1400
7	Umariha	0	0	0
8	Patni	0	0	0
9	Rahaniya	0	0	0
<b>II</b>	<b>Cluster Villages</b>	1		
	<b>Total All Villages</b>	3		

- 7.205 Mustard being one of the important crops of Satna district, 3 number of O.F.Ts. have been organised with much higher yield rates in after training situations as compared to district and state level per hectare yields of 385 kg and 1009 kg respectively.
- 7.206 No O.F.T. has been organised for crops like maize, lentil, jowar, soybean, cotton, sugarcane and linseed which are not important crops of Satna district.
- 7.207 Surprisingly, no O.F.T. has been organised for any of the horticulture crops which obviously is a gap in performance. The O.F.Ts. should have been organised for crops like Potato, Onion, Tomato and Brinjal for which there is good response in vocational training courses. Besides, horticultural crops are good source of income which are gradually becoming popular in Satna district. The measures of O.F.Ts. would have boosted-up the productivity levels of such crops along with enhancement in family income.**
- 7.208 No. O.F.Ts. have been organised for subjects like livestock and dairying, fishery development, agro-forestry, organic farming and watershed activities. A few O.F.Ts. should have been organised for livestock and dairying, agro forestry and watershed activities which have scope in our sample area of study.**
- 7.209 In the following paragraphs summing-up efforts have been made for the results of O.F.T.**
- In case of O.F.T., the yield per-hectare in after training situation is more than before training conditions as has occurred for both vocational training and front line demonstrations which shows the positive impact of K.V.Ks. efforts.
  - No O.F.T. has been organised for any of the horticulture crops which certainly shows the deficiency in performance. A few O.F.Ts. must have been organised for horticulture crops like potato, onion and and tomato etc. which are common items of consumption.
  - Since no O.F.Ts. have been organised on subjects like livestock and dairying, poultry, fishery development, agro-forestry, organic farming and watershed activities, the impact of O.F.T. relating to such subjects is obviously not visible.

## STATUS OF ACTIVITIES IN CONTROL VILLAGE – BHARGAWAN

7.210 The study has identified one control village i.e. Bhargawan with 8 number of sample households and 45 sample family members where there is no interventions of K.V.K. The information regarding common items of agronomical and horticulture crops have been collected to show the comparative status in areas of intervention and non-intervention. However, in case of control village before and after training situations have not been shown as there is no effort of K.V.K. in this village. **For comparison the average performance of vocational training in after training situation has been taken as the participation regarding all subjects is maximum in case of vocational training.** The table below shows the comparative status of control village on one side and adopted and cluster villages on other side.

Table No. 7.64

Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3175.00	3379.56	(+) 204.56
2	Paddy	2443.00	3088.50	(+) 645.50
3	Maize	1600.00	1809.00	(+) 209.00
4	Jowar	500.00	-	-
<b>PULSES</b>				
5	Gram	3100.00	3128.44	(+) 28.44
6	Arhar	1250.00	1130.11	(-) 119.89
7	Lentil	1600.00	-	-
<b>OIL SEEDS</b>				
8	Mustard	780.00	1058.67	(+)278.67
<b>HORTICULTURE CROPS – QUINTAL</b>				
9	Potato	187.00	212.56	(+) 25.56
10	Onion	158.00	241.20	(+) 83.20
11	Tomato	100.00	184.88	(+) 84.88
12	Brinjal	150.00	196.75	(+) 46.75
13	Chilly	80.00	168.75	(+) 88.75
14	Bhindi	75.00	189.60	(+) 114.60
15	Cucurbits	40.00	-	-
16	Papaya	50.00	-	-

7.211 Except for the Arhar crop where per hectare yield in control village is more than adopted and cluster villages, for rest of the crops the per hectare yield in adopted and cluster villages is more than control village that shows the positive impact of K.V.Ks. efforts.

7.212 **In the field of home science activities particularly for activities like preparation of pickles and papad/badi/jam/jelly etc. substantial work has been done in adopted and cluster villages through the intervention of K.V.K. whereas such activities are very marginal in control village. These activities are important both form income augmentation and employment point of views.**

## RESULTS OF SURVEY – INDIVIDUAL PARTICULARS ADOPTED AND CLUSTER VILLAGES

7.213 In the following paragraphs an attempt has been made to highlight the various reactions of 25 percent of individuals taken from the sample family members. The table below shows the details;

Table No. 7.65  
Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	183	45
2	Cluster Villages	282	68
3	Control Village	45	11
	<b>Total</b>	<b>510</b>	<b>124</b>

7.214 Though the 25 percent of 510 comes to 127 but we have taken figures of 124 because of certain demographic particulars. However, a few figures plus or minus is hardly meaningful so long it does not vitiate the survey results.

7.215 In the following paragraphs an attempt has been made to highlight the individual reactions in **adopted and cluster villages** i.e. for **113 individuals**.

7.216 The criteria for selection of individuals are as follows;

- The individual should be the adult member of the family.
- He should be associated with any programme of K.V.K. For individuals of control village, this criterion is not applicable.
- He/She should be literate, may be without having any formal education.

### SOCIAL CLASSIFICATION OF INDIVIDUALS

7.217 The table below shows the details;

Table No. 7.66  
Social Classification

S. No.	Name of the Village	No. of Individual	Social classification			
			S.T.	S.C.	O.B.C.	GENERAL
1	2	3	4	5	6	7
1.	Khodari	7	4	2	0	1
2.	Devlaha	14	11	0	3	0
3.	Patnakalan	24	8	8	8	0
	<b>Adopted Villages</b>	45	23	10	11	1
4.	Kanpur	16	8	8	0	0
5.	Tangi	7	7	0	0	0
6.	Degarhot	10	6	0	3	1
7.	Umariha	9	8	0	0	1
8.	Patni	16	2	12	2	0
9.	Rahaniya	10	8	0	0	2
	<b>Cluster Villages</b>	68	39	20	5	4
	<b>Total All Villages</b>	113	62	30	16	5

7.218 The above table shows that the majority of 62 individuals are from S.T. community that accounts for 54.87 percent to total of 113 individuals from adopted and cluster villages. The combined percentage of S.C. and O.B.C. communities is 40.71 while the members from general communities constitute 4.42 percent to total individuals. **Thus the entire area of adopted and cluster villages is predominated by scheduled tribe population that throws a challenge to K.V.K. Scientists to achieve tangible results for bringing this vulnerable community to main stream of development.**

## INDIVIDUALS CLASSIFIED ON THE BASIS OF RELIGION

7.219 The following table gives the details;

Table No. 7.67  
Classification on the Basis of Religion

S. No.	Name of the Village	No. of Individual	Religion					
			Hindu	Muslim	Sikh	Christian	Nauabudh	Others
1	2	3	4	5	6	7	8	9
1.	Khodari	7	7	0	0	0	0	0
2.	Devlaha	14	14	0	0	0	0	0
3.	Patnakalan	24	24	0	0	0	0	0
	<b>Adopted Villages</b>	45	45	0	0	0	0	0
4.	Kanpur	16	16	0	0	0	0	0
5.	Tangi	7	7	0	0	0	0	0
6.	Degarhot	10	10	0	0	0	0	0
7.	Umariha	9	9	0	0	0	0	0
8.	Patni	16	16	0	0	0	0	0
9.	Rahaniya	10	10	0	0	0	0	0
	<b>Cluster Villages</b>	68	68	0	0	0	0	0
	<b>Total</b>	113	113	0	0	0	0	0

7.220 The above table shows that cent-percent individuals are the followers of Hindu religion.

## AWARENESS ABOUT THE K.V.K.

7.221 The table below shows the details;

Table No. 7.68  
Awareness About the K.V.K.

S. No	Name of the Village	No. of Individual	Awareness about existence of K.V.K.		If 'yes' knowledge about its location		Awareness about services rendered by the K.V.K.	
			Yes	No	Yes	No	Yes	No
1	2	3	4	5	6	7	8	9
1.	Khodari	7	7	0	7	0	7	0
2.	Devlaha	14	14	0	14	0	14	0
3.	Patnakalan	24	24	0	24	0	24	0
	<b>Adopted Villages</b>	45	45	0	45	0	45	0
4.	Kanpur	16	16	0	16	0	16	0
5.	Tangi	7	7	0	7	0	7	0
6.	Degarhot	10	10	0	10	0	10	0
7.	Umariha	9	9	0	9	0	9	0
8.	Patni	16	16	0	16	0	16	0
9.	Rahaniya	10	10	0	10	0	10	0
	<b>Cluster Villages</b>	68	68	0	68	0	68	0
	<b>Total All Villages</b>	113	113	0	113	0	113	0

7.222 The cent percent awareness about K.V.K. in terms of its location and more importantly the services rendered by it is undoubtedly an encouraging indication that indicates the fruitful efforts of K.V.K. scientists in their stride to popularise the functions of K.V.K.

## KNOWLEDGE ABOUT SPECIFIC SERVICES RENDERED BY K.V.K.

7.223 The table below shows the details;

Table No. 7.69  
Knowledge about Specific Services Rendered by the K.V.K.

S. No	Name of the Village	No. of Individual	Knowledge about vocational training		Knowledge about front line demonstration		Knowledge about on farm testing	
			Yes	No	Yes	No	Yes	No
1	2	3	4	5	6	7	8	9
1.	Khodari	7	7	0	7	0	7	0
2.	Devlaha	14	14	0	14	0	14	0
3.	Patnakalan	24	24	0	24	0	24	0
	<b>Adopted Villages</b>	45	45	0	45	0	45	0
4.	Kanpur	16	16	0	14	2	8	8
5.	Tangi	7	7	0	7	0	7	0
6.	Degarhot	10	10	0	10	0	10	0
7.	Umariha	9	9	0	9	0	9	0
8.	Patni	16	16	0	16	0	16	0
9.	Rahaniya	10	10	0	10	0	10	0
	<b>Cluster Villages</b>	68	68	0	66	2	60	8
	<b>Total All Villages</b>	113	113	0	111	2	105	8

7.224 Regarding **Vocational Training** the cent percent awareness of the individuals from adopted and cluster villages seems obvious as participation of households in such training programmes is maximum.

7.225 Knowledge of 111 individuals [98.23 percent] about F.L.D. is encouraging that shows impact of the positive efforts of K.V.K. Scientists.

7.226 Similarly awareness of the 105 individuals [92.92 percent] about O.F.T. is, somewhat, encouraging.

#### FIELD VISITS OF K.V.K. SCIENTISTS

7.227 Regular field visits by the K.V.K. scientists are necessary pre-requisites for implementation of agriculture related technology and also to keep alive the confidence level of the farming community. The table below shows the extent of such visits.

Table No. 7.70  
Field Visits of K.V.K. Scientists

S. No	Name of the Village	No. of Individual	The duration gap			
			One month (1)	Two months (2)	More than two months (3)	Never (4)
1	2	3	4	5	6	7
1.	Khodari	7	0	0	0	6
2.	Devlaha	14	0	0	0	14
3.	Patnakalan	24	0	0	0	24
	<b>Adopted Villages</b>	45	0	0	0	44
4.	Kanpur	16	0	0	7	9
5.	Tangi	7	0	0	0	7
6.	Degarhot	10	0	0	0	10
7.	Umariha	9	1	0	0	8
8.	Patni	16	0	0	0	16
9.	Rahaniya	10	0	0	0	10
	<b>Cluster Villages</b>	68	1	0	7	60
	<b>Total All Villages</b>	113	1	0	7	104



7.228 Out of total of 113 individuals 112 individuals [99.12 percent] have informed about irregular visits of K.V.K. scientists which seems rather an inflated information, which is contradicted by the fact of cent-percent awareness level of the farmers about services rendered by the K.V.K. The high degree of absence of K.V.K. scientists would have not lead to such type of positive results. May be the individuals might have vented out their regrets caused due to some other factors by informing about irregular visits by K.V.K. scientists. Even if half the information is taken to be correct, the picture remains to be grim. At least a fortnightly visit by K.V.K. scientists is necessary to keep-up the confidence level of the farmers. **The authorities of K.V.K., Satna may sort out this issue to avoid such regrets from farming communities for whom they work.**

#### THE STATUS OF REGULAR CONTACT WITH K.V.K.

7.229 The regular contact of the farmes with the K.V.K. is one of the determining factors for implementation of agriculture related technologies in the field. The table below shows the details;

Table No. 7.71  
Status of Regular Contact with K.V.K.

S. No	Name of the Village	No. of Individual	Are you regular touch with KVK		If yes reason			if 'no' the reason
			Yes (1)	No (2)	for seed (1)	plant protection (2)	New technology (3)	Distance
1	2	3	4	5	6	7	8	9
1.	Khodari	7	7	0	1	0	5	0
2.	Devlaha	14	14	0	0	1	13	0
3.	Patnakalan	24	23	1	0	1	23	0
	<b>Adopted Villages</b>	45	44	1	1	2	41	0
4.	Kanpur	16	16	0	3	3	10	0
5.	Tangi	7	7	0	0	0	7	0
6.	Degarhot	10	10	0	0	0	10	0
7.	Umariha	9	8	1	0	1	8	2
8.	Patni	16	16	0	0	0	16	0
9.	Rahaniya	10	10	0	2	2	6	0
	<b>Cluster Villages</b>	68	67	1	5	6	57	2
	<b>Total All Villages</b>	113	111	2	6	8	98	2

7.230 Out of total of 113 individuals, 111 individuals [98.23 percent] are in regular contact with K.V.K. mainly because of the desire for adopting new technology [86.73 percent individuals] and for plant protection [7.08 percent individuals]. A total number of 2 individuals are not in regular contact with K.V.K. which is 1.77 percent to total individuals. The main reason is the distance factor due to which such individuals can not keep a regular contact.

#### STATUS OF IMPLEMENTATION OF THE SERVICES OF THE K.V.K.

7.231 The table below shows the details;

Table No. 7.72  
Implementation of the Services of K.V.K.

S No	Name of the Village	No. of Individual	Implementation of the services of K.V.K.		If yes in what fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Khodari	7	7	0	7	0	0	0	0
2.	Devlaha	14	14	0	12	0	0	0	0
3.	Patnakalan	24	24	0	24	0	0	0	0
	<b>Adopted Villages</b>	45	45	0	43	0	0	0	0
4.	Kanpur	16	16	0	16	0	0	0	0
5.	Tangi	7	7	0	7	0	0	0	0
6.	Degarhot	10	10	0	10	0	0	0	0
7.	Umariha	9	9	0	9	0	0	0	0
8.	Patni	16	16	0	16	0	0	0	0
9.	Rahaniya	10	8	2	10	0	0	0	0
	<b>Cluster Villages</b>	68	66	2	68	0	0	0	0
	<b>Total All Villages</b>	113	111	2	111	0	0	0	0

Table No. 7.72 [Contd...]  
Implementation of the Services of K.V.K

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Not satisfied with new technology	Problem of resources	Satisfied with present status
1	2	11	12	13	14	15	16	17	18
1.	Khodari	7	0	0	0	0	0	0	0
2.	Devlaha	14	0	0	0	0	0	0	0
3.	Patnakalan	22	0	0	0	0	0	0	0
	<b>Adopted Villages</b>	43	0	0	0	0	0	0	0
4.	Kanpur	16	0	0	0	0	0	0	0
5.	Tangi	7	0	0	0	0	0	2	0
6.	Degarhot	10	0	0	0	0	0	0	0
7.	Umariha	9	0	0	0	0	0	0	0
8.	Patni	15	0	0	0	0	0	0	0
9.	Rahaniya	10	0	0	0	0	0	0	0
	<b>Cluster Villages</b>	67	0	0	0	0	0	2	0
	<b>Total All Villages</b>	110	0	0	0	0	0	2	0

7.232 The above table shows that out of 113 individuals, 111 individuals have implemented the services of K.V.K. which is 98.23 percent to total respondents. **This is an achievement by itself.** It is worth mentioning here that the figures of itemwise coverage will not tally with the figure of 111 as the same person from agronomy might have implemented the improved techniques in the fields of horticulture, animal husbandry, home science etc.

7.233 The subject wise coverage figures show that the highest number of 111 individuals [98.23 percent to total individuals] have implemented the improved techniques relating to agronomy followed by 110 individuals [97.35 percent] implementing the improved techniques relating to home science. **In rest of the subjects like horticulture, animal husbandry, fishery, poultry, agro-forestry, organic farming, watershed activities and training of rural youth no implementation efforts have been done by the sample individuals as for these activities even vocational trainings have hardly been organised. Intensive efforts are required in the fields like animal husbandry, agro-forestry and watershed activities as these fields have extensive scope for employment and income generation.**

**7.234 Only two individuals from village Tangi [cluster village] have not implemented the services of K.V.K., mainly because of the problems of resources.**

**SATISFACTION LEVEL OF THE INDIVIDUALS ABOUT THE SERVICES OF K.V.K.**

7.235 The level of satisfaction derived from the services of K.V.K. is important to sustain the efforts of K.V.K. over a period of time. The table below shows the details;

Table No. 7.73  
Satisfaction Level of the Individuals

S. No	Name of the Village	No. of Individual	Satisfied with the impact		If yes in what fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Khodari	7	7	0	7	0	0	0	0
2.	Devlaha	14	13	1	12	0	0	0	0
3.	Patnakalan	24	24	0	24	0	0	0	0
	<b>Adopted Villages</b>	45	44	1	43	0	0	0	0
4.	Kanpur	16	16	0	16	0	0	0	0
5.	Tangi	7	7	0	7	0	0	0	0
6.	Degarhot	10	9	1	10	0	0	0	0
7.	Umariha	9	9	0	9	0	0	0	0
8.	Patni	16	16	0	16	0	0	0	0
9.	Rahaniya	10	10	0	10	0	0	0	0
	<b>Cluster Villages</b>	68	67	1	68	0	0	0	0
	<b>Total All Villages</b>	113	111	2	111	0	0	0	0

Table No. 7.73 [Contd...]  
Satisfaction Level of the Individuals

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Technique is difficult to follow	Inputs are not easily available	Non-availability of advice in the time
1	2	11	12	13	14	15	16	17	18
1.	Khodari	7	0	0	0	0	0	0	0
2.	Devlaha	14	0	0	0	0	0	0	0
3.	Patnakalan	22	0	0	0	0	0	0	0
	<b>Adopted Villages</b>	43	0	0	0	0	0	0	0
4.	Kanpur	16	0	0	0	0	0	0	0
5.	Tangi	7	0	0	0	0	0	2	0
6.	Degarhot	10	0	0	0	0	0	0	0
7.	Umariha	9	0	0	0	0	0	0	0
8.	Patni	15	0	0	0	0	0	0	0
9.	Rahaniya	10	0	0	0	0	0	0	0
	<b>Cluster Villages</b>	67	0	0	0	0	0	2	0
	<b>Total All Villages</b>	110	0	0	0	0	0	2	0

7.236 The above table shows the 98.23 percent level of satisfaction of sample individuals for the services rendered by the K.V.K. which in itself is a startling achievement.

7.237 Agronomy and Home Science are the subjects for which satisfaction level is substantial. In subjects like horticulture, animal husbandry, fishery, poultry, organic farming, watershed activities and training of rural youth the satisfaction level is nil because of the basic fact that for these subjects no substantial number of vocational training has been initiated nor much of the FLDs or OFTs have been organised. Moreover, the cultivators of our sample area are not much interested in these activities, as they do not contribute substantially to their family income. However, efforts must be made to popularize the activities like animal husbandry, agro-forestry and watershed activities, as these subjects are important for rural economy.

## IMPACT ON INCOME ENHANCEMENT

7.238 The validity of any effort is ultimately measured by its impact over income enhancement whether directly or indirectly. The table below shows the details;

Table No. 7.74  
Impact on Income Enhancement

S. No.	Name of the Village	No. of Individual	Income enhancement		If yes the fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Khodari	7	7	0	11	0	0	0	0
2.	Devlaha	14	14	0	14	0	0	0	0
3.	Patnakalan	24	23	1	21	0	0	0	1
	<b>Adopted Villages</b>	45	44	1	46	0	0	0	1
4.	Kanpur	16	16	0	16	0	0	0	0
5.	Tangi	7	7	0	7	0	0	0	0
6.	Degarhot	10	10	0	8	0	0	0	0
7.	Umariha	9	9	0	9	0	0	0	0
8.	Patni	16	16	0	16	0	0	0	0
9.	Rahaniya	10	10	0	10	0	0	0	0
	<b>Cluster Villages</b>	68	68	0	66	0	0	0	0
	<b>Total All Villages</b>	113	112	1	112	0	0	0	1

Table No. 7.74 [Contd...]  
Impact on Income Enhancement

S. No.	Name of the Village						If no the reasons		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Could not follow the instruction	Problem of resource	Non-availability technical advice in time
1	2	11	12	13	14	15	16	17	18
1.	Khodari	7	0	0	0	0	0	0	0
2.	Devlaha	14	0	0	0	0	0	0	0
3.	Patnakalan	23	0	0	0	0	0	0	0
	<b>Adopted Villages</b>	44	0	0	0	0	0	0	0
4.	Kanpur	16	0	0	0	0	0	0	0
5.	Tangi	7	0	0	0	0	0	0	0
6.	Degarhot	10	0	0	0	0	0	0	0
7.	Umariha	9	0	0	0	0	0	0	0
8.	Patni	15	0	0	0	0	0	0	0
9.	Rahaniya	10	0	0	0	0	0	0	1
	<b>Cluster Villages</b>	67	0	0	0	0	0	0	1
	<b>Total All Villages</b>	111	0	0	0	0	0	0	1

7.239 From the above table 99.12 percent positive response regarding impact of K.V.K. services over income enhancement is visualized which is creditable to the efforts of the K.V.K. in various fields of its operation.

7.240 As is expected, maximum number of 112 individuals i.e. 99.12 percent to total of 113 individuals have expressed the positive impact on income enhancement through practice of agronomy followed by home science [111 individuals].

### EXTENT OF INCOME ENHANCEMENT

7.241 Assessment of income level of individuals is one of the most difficult aspects of primary data collection as the persons are usually shy of giving the correct information. However, through indirect approach, information regarding income has been collected which is given in the following table;

Table No. 7.75  
Extent of Income Enhancement

S. No	Name of the Village	Percentage increase in Income								
		1 to 10 %	11 to 20%	21 to 30%	31 to 50%	51 to 60%	61 to 70%	71 to 80%	81 to 90%	91 to 100%
1	2	3	4	5	6	7	8	9	10	11
1.	Khodari	0	0	7	0	0	0	0	0	0
2.	Devlaha	0	1	13	0	0	0	0	0	0
3.	Patnakalan	0	2	15	7	0	0	0	0	0
	<b>Adopted Villages</b>	0	3	35	7	0	0	0	0	0
4.	Kanpur	8	0	8	0	0	0	0	0	0
5.	Tangi	0	0	7	0	0	0	0	0	0
6.	Degarhot	0	2	8	0	0	0	0	0	0
7.	Umariha	0	1	8	0	0	0	0	0	0
8.	Patni	0	10	4	2	0	0	0	0	0
9.	Rahaniya	0	2	8	0	0	0	0	0	0
	<b>Cluster Villages</b>	8	15	43	2	0	0	0	0	0
	<b>Total All Villages</b>	8	18	78	9	0	0	0	0	0

7.242 The above table shows that out of 113 individuals, 96 individuals [84.96 percent to total individuals] have reported about 11 to 30 percent enhancement in income due to the impact of various services of K.V.K. while 9 individuals [7.96 percent] reported about 31 to 50 percent income enhancement. **The impact of the K.V.Ks. efforts over income enhancement is, somewhat, stratling.**

## OPINION ABOUT CONTINUANCE OF THE SERVICES OF K.V.K.

7.243 The table below shows the details;

Table No. 7.76  
Opinion about Continuance of K.V.K. Services

S. No.	Name of the Village	No. of Individual	Continuation of the services of K.V.K.	
			Yes (1)	No (2)
1	2	3	4	5
1.	Khodari	7	7	0
2.	Devlaha	14	14	0
3.	Patnakalan	24	23	1
	<b>Adopted Villages</b>	45	44	1
4.	Kanpur	16	16	0
5.	Tangi	7	5	2
6.	Degarhot	10	10	0
7.	Umariha	9	9	0
8.	Patni	16	16	0
9.	Rahaniya	10	10	0
	<b>Cluster Villages</b>	68	66	2
	<b>Total All Villages</b>	113	110	3

7.244 The above table shows that out of 113 individuals, 110 individuals [97.35 percent to total individuals] have reported for continuance of the services by K.V.K. particularly for subjects like home science and agronomy. Only 3 number of individuals have given negative opinion which seems natural in the context of large number of respondents. **Viewing things from the positive angle, the performance of the K.V.K. seems laudable, as the efforts have won the confidence of the farming community of our area of study.**

## SUGGESTIONS FOR ADDITIONAL SERVICES TO BE RENDERED BY THE K.V.K.

7.245 Information regarding suggestions for additional services to be rendered by the K.V.K. has been collected from the individuals. The table below shows the details;

Table No. 7.77  
Suggestions for Additional Services to be Rendered by K.V.K.

S. No.	Name of the Village	No. of Individual	Suggestions for additional services by KVK			
			Production of by product	Marketing strategy	Weather forecasting	Availability of agri. inputs at panchayat level
1	2	3	4	5	6	7
1.	Khodari	7	6	0	0	1
2.	Devlaha	14	7	1	0	6
3.	Patnakalan	24	10	7	7	0
	<b>Adopted Villages</b>	45	23	8	7	7
4.	Kanpur	16	3	3	0	10
5.	Tangi	7	4	1	0	2
6.	Degarhot	10	6	0	0	4
7.	Umariha	9	1	6	2	0
8.	Patni	16	2	1	6	7
9.	Rahaniya	10	9	0	0	1
	<b>Cluster Villages</b>	68	25	11	8	24
	<b>Total All Villages</b>	113	48	19	15	31

- 7.246 Cent percent individuals have given their useful suggestions about introduction of additional services to be rendered by the K.V.K. Important among these are regarding suggestions about **production of by-product of crops, development of marketing strategy for fair return of the product and making available agricultural inputs at Gram Panchayat Level** wherein 48, 19 and 31 individuals respectively have given their useful suggestions.
- 7.247 Regarding production of by-product, that may lead to some processing activities, the work may be initiated in liaison with Industries Department of the district.
- 7.248 Marketing of agriculture produce is gaining importance to avoid the exploitation of farmers by brokers. The intervention of K.V.K. personnel will be very useful if some sort of training is organised for beneficiary cultivators in liaison with Mandi Committees.
- 7.249 Regarding availability of agriculture inputs at Gram Panchayat level, the K.V.K Scientists may bring home the solution in consultation with the Chief Executive Officer of Zila Panchayat by developing modalities for making available things at Gram Panchayat level.
- 7.250 It is, therefore, worth considering to incorporate in the mandate of K.V.K. the subjects like production of by-products and development of marketing strategy of the product of the cultivators.**

#### UTILIZATION OF THE ENHANCED INCOME

- 7.251 Proper utilization of enhanced income is equally important as compared to its generation. The table below shows the utilization of enhanced income of sample individuals for purchase of various agriculture inputs;

Table No. 7.78  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Tractor		Harvester		Thresher	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Khodari	7	0	7	0	7	0	7
2.	Devlaha	14	0	14	0	14	0	14
3.	Patnakalan	24	0	24	0	24	0	24
	<b>Adopted Villages</b>	45	0	45	0	45	0	45
4.	Kanpur	16	0	16	0	16	0	16
5.	Tangi	7	0	7	0	7	0	7
6.	Degarhot	10	0	10	0	10	0	10
7.	Umariha	9	0	9	0	9	0	9
8.	Patni	16	0	16	0	16	0	16
9.	Rahaniya	10	0	10	0	10	0	10
	<b>Cluster Villages</b>	68	0	68	0	68	0	68
	<b>Total All Villages</b>	113	0	113	0	113	0	113

Table No. 7.78 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual						
			Plough		Seed drill		Bullock pair	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	10	11	12	13	14	15
1.	Khodari	7	0	7	0	7	2	5
2.	Devlaha	14	0	14	0	14	0	14
3.	Patnakalan	24	13	11	0	24	4	20
	<b>Adopted Villages</b>	45	13	32	0	45	6	39
4.	Kanpur	16	0	16	0	16	0	16
5.	Tangi	7	0	7	0	7	0	7
6.	Degarhot	10	0	10	0	10	0	10
7.	Umariha	9	4	5	0	9	1	8
8.	Patni	16	12	4	0	16	2	14
9.	Rahaniya	10	0	10	0	10	1	9
	<b>Cluster Villages</b>	68	16	52	0	68	4	64
	<b>Total All Villages</b>	113	29	84	0	113	10	103

Table No. 7.78 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual						
			Power/Knapsac sprayer		Handhoe		Storage facility	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	16	17	18	19	20	21
1.	Khodari	7	0	7	0	7	0	7
2.	Devlaha	14	0	14	0	14	0	14
3.	Patnakalan	24	0	24	0	24	0	24
	<b>Adopted Villages</b>	45	0	45	0	45	0	45
4.	Kanpur	16	1	15	0	16	0	16
5.	Tangi	7	0	7	0	7	0	7
6.	Degarhot	10	1	9	0	10	0	10
7.	Umariha	9	0	9	0	9	0	9
8.	Patni	16	0	16	0	16	0	16
9.	Rahaniya	10	0	10	0	10	0	10
	<b>Cluster Villages</b>	68	2	66	0	68	0	68
	<b>Total All Villages</b>	113	2	111	0	113	0	113



Table No. 7.78 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Tube well /Dug well		Electric/diesel motor	
			Yes (1)	No (2)	Yes (1)	No (2)
			22	23	24	25
1.	Khodari	7	0	7	0	7
2.	Devlaha	14	0	14	0	14
3.	Patnakalan	24	0	24	0	24
	<b>Adopted Villages</b>	45	0	45	0	45
4.	Kanpur	16	0	16	0	16
5.	Tangi	7	0	7	0	7
6.	Degarhot	10	0	10	0	10
7.	Umaraha	9	0	9	0	9
8.	Patni	16	0	16	0	16
9.	Rahaniya	10	0	10	0	10
	<b>Cluster Villages</b>	68	0	68	0	68
	<b>Total All Villages</b>	113	0	113	0	113

7.252 The above table shows that 41 individuals have utilized their enhanced income for purchase of various agriculture inputs which constitutes 36.28 percent to total number of 113 sample individuals. The purchases are mainly limited on items like plough, bullock pair and power knapsac sprayer. The utilization level of enhanced income for purchase of agriculture input is not much impressive.

#### IMPACT OF ENHANCED INCOME OVER EDUCATION LEVELS

7.253 The table below shows the impact of enhanced income over levels of education in our area of study;

Table No. 7.79  
Impact of Enhanced Income Over Levels of Education

S. No.	Name of the Village	No. of Individual	Impact on education due to enhanced income		If yes in what manner				
			Yes (1)	No (2)	More Male Children go to primary/middle (1)	More Female Children go to primary/middle (2)	More male children attend secondary level education (3)	More female children attend secondary level education (4)	Male Female children go for higher education non (5)
			4	5	6	7	8	9	10
1.	Khodari	7	6	1	6	0	0	0	0
2.	Devlaha	14	9	5	11	1	0	0	0
3.	Patnakalan	24	19	5	10	8	0	0	0
	<b>Adopted Villages</b>	45	34	11	27	9	0	0	0
4.	Kanpur	16	10	6	9	1	0	0	0
5.	Tangi	7	6	1	6	0	0	0	0
6.	Degarhot	10	9	1	9	0	0	0	0
7.	Umaraha	9	9	0	7	2	0	0	0
8.	Patni	16	11	5	4	5	0	0	0
9.	Rahaniya	10	8	2	4	4	0	0	0
	<b>Cluster Villages</b>	68	53	15	39	12	0	0	0
	<b>Total All Villages</b>	113	87	26	66	21	0	0	0

Table No. 7.79 [Contd...]  
Impact of Enhanced Income Over Levels of Education

S. No	Name of the Village	No. of Individual	If no the reasons						
			Educa- tion is no priority (1)	Purchase of agr. inputs (2)	Exp. on religious /social rituals (3)	Purchase of luxutry items like TV fridge two wheeler etc.(4)	Consump- tion of intoxicants (5)	Deposi- ted in the bank (6)	Debt repay- ment (7)
1	2	3	11	12	13	14	15	16	17
1.	Khodari	7	1	0	0	0	0	0	0
2.	Devlaha	14	0	7	0	0	0	0	0
3.	Patnakalan	24	2	0	0	0	0	0	0
	<b>Adopted Villages</b>	45	3	7	0	0	0	0	0
4.	Kanpur	16	1	5	0	0	0	0	0
5.	Tangi	7	0	1	0	0	0	0	1
6.	Degarhot	10	0	0	1	0	0	0	0
7.	Umariha	9	0	0	0	0	0	0	0
8.	Patni	16	5	0	0	0	0	0	0
9.	Rahaniya	10	0	2	0	0	0	0	0
	<b>Cluster Villages</b>	68	6	8	1	0	0	0	1
	<b>Total All Villages</b>	113	9	15	1	0	0	0	1

7.254 Out of 113 individuals, 87 individuals [76.99 percent] have reported positive impact of enhanced income over levels of education while 26 number of individuals [23.01 percent] have refused about such impact. The positive impact is predominant in case of primary and middle level education for both boys and girls wherein 87 individuals [76.99 percent to total individuals] have reported that due to enhanced income more number of boys and girls are being sent to attend elementary level [primary + middle] of education. The positive impact of enhanced income on levels of education shows the awareness of the sample individuals about value of education.

7.255 Regarding negative responses by 26 individuals, 15 individuals [13.27 percent to total of 113 individuals] have reported that due to purchase of agriculture implements the priority on education could not be given.

#### **IMPACT OF ENHANCED INCOME OVER HEALTH STATUS**

7.256 Health is again an important social factor that accounts for efficiency in pursuance of any occupation. The table below shows the impact of enhanced income over health status of sample population.

Table No. 7.80  
Impact of Enhanced Income over Health Conditions

S. No.	Name of the Village	No. of Individual	Impact on Health		If yes in what manner				
			Yes (1)	No (2)	Services of medical personnel (1)	Vaccination of children/women done (2)	Child nutrition (3)	Female nutrition during gestation (4)	Adoption of Family welfare measures
1	2	3	4	5	6	7	8	9	10
1.	Khodari	7	7	0	7	0	0	0	0
2.	Devlaha	14	14	0	11	1	0	0	0
3.	Patnakalan	24	17	7	2	8	3	4	2
	<b>Adopted Villages</b>	45	38	7	20	9	3	4	2
4.	Kanpur	16	16	0	7	8	0	1	0
5.	Tangi	7	7	0	6	1	0	0	0
6.	Degarhot	10	10	0	5	5	0	0	0
7.	Umariha	9	8	1	0	5	3	0	0
8.	Patni	16	10	6	0	9	1	0	0
9.	Rahaniya	10	10	0	8	1	0	1	0
	<b>Cluster Villages</b>	68	61	7	26	29	4	2	0
	<b>Total All Villages</b>	113	99	14	46	38	7	6	2

Table No. 7.80 [Contd...]  
Impact of Enhanced Income over Health Conditions

S. No	Name of the Village	No. of Individual	If no the reasons						
			Health is no priority	Believe in local healing methods	Purchase of agri. inputs	Exp. on religious functions	Luxury items TV Fridge, Two wheeler, Four wheeler	Consumption of intoxicants	Deposited in bank
1	2	3	11	12	13	14	15	16	17
1.	Khodari	7	0	0	0	0	0	0	0
2.	Devlaha	14	0	0	0	0	0	0	0
3.	Patnakalan	24	6	2	0	0	0	0	0
	<b>Adopted Villages</b>	45	6	2	0	0	0	0	0
4.	Kanpur	16	0	0	0	0	0	0	0
5.	Tangi	7	0	0	0	0	0	0	0
6.	Degarhot	10	0	0	0	0	0	0	0
7.	Umariha	9	1	0	0	0	0	0	0
8.	Patni	16	5	0	0	0	0	0	0
9.	Rahaniya	10	0	0	0	0	0	0	0
	<b>Cluster Villages</b>	68	6	0	0	0	0	0	0
	<b>Total All Villages</b>	113	12	2	0	0	0	0	0

7.257 The above table shows that out of 113 individuals, 99 individuals [87.61 percent to total of 113 individuals] have reported about positive impact of enhanced income over health status which shows the awareness of the sample population about value of keeping good health. The items of positive responses like hiring of the services of medical personnel [46 individuals], vaccination of children/women [38 individuals]. Child nutrition [7 individuals] female nutrition during gestation [6 individuals] and adoption of family welfare measures [2 individuals] are indicative of healthy trend since the individuals are more concerned particularly about, the health status of women and children.

7.258 Though the number of individuals with negative response is only 14 [12.37 percent to total of 113 individuals] but the opinion like health is no priority by 12 number of individuals is a sort of red alert to K.V.K. scientists who must uproot such attitude lest they go deep into the thinking of more individuals.

#### IMPACT OF ENHANCED INCOME OVER POTABLE DRINKING WATER SUPPLY

7.259 The table below shows the details;

Table No. 7.81

Impact of Enhanced Income over Potable Drinking Water Supply

S. No	Name of the Village	No. of Individual	Improve in potable drinking water	
			Yes	No
1	2	3	4	5
1.	Khodari	7	2	5
2.	Devlaha	14	0	14
3.	Patnakalan	24	0	24
	<b>Adopted Villages</b>	45	2	43
4.	Kanpur	16	0	16
5.	Tangi	7	0	7
6.	Degarhot	10	0	10
7.	Umariha	9	0	9
8.	Patni	16	2	14
9.	Rahaniya	10	2	8
	<b>Cluster Villages</b>	68	4	64
	<b>Total All Villages</b>	113	6	107

7.260 The above tabke shows a reverse situation where the negative response is to the tune of 107 individuals which is 94.69 percent to total of 113 individuals while the positive response is by only 6 individuals [5.31 percent]. These facts show that availability of potable drinking water is no priority in rural areas. The majority of positive respondents have indicated the spending of portion of enhanced income over installation of hand pumps. **The solution to this problem of neglect of protable drinking water lies in enhancement of agricultural income of the rural population which if achieved will solve the problem of drinking water and also sanitation as the enhanced income induces the individuals to take care of the finer details of life.**

## IMPACT OF ENHANCED INCOME OVER HOUSING CONDITIONS

7.261 The table below shows the details;

Table No. 7.82  
Impact of Enhanced Income over Housing Conditions

S. No	Name of the Village	No. of Individual	Enhancement in income resulted in improved housing contentions	
			Yes	No
1	2	3	4	5
1.	Khodari	7	3	4
2.	Devlaha	14	7	7
3.	Patnakalan	24	2	22
	<b>Adopted Villages</b>	45	12	33
4.	Kanpur	16	0	16
5.	Tangi	7	3	4
6.	Degarhot	10	4	6
7.	Umaraha	9	2	7
8.	Patni	16	1	15
9.	Rahaniya	10	0	10
	<b>Cluster Villages</b>	68	10	58
	<b>Total All Villages</b>	113	22	91

7.262 The above table shows that out of 113 individuals, 22 individuals [19.47 percent] have positive responses while 91 individuals [80.53 percent] have refused spending of any amount of enhanced income over improving the housing conditions. The status seems obvious as frequent expenditure over improving the housing condition is not usually done.

## AWARENESS ABOUT WELFARE SCHEMES INITIATED BY THE STATE GOVERNMENT WITH ASSISTANCE FROM GOVERNMENT OF INDIA

7.263 The basic objectives of various welfare schemes initiated by the government are providing employment opportunities to the target group for augmentation of income thereby improving the quality of life of the individuals/community. Though this information has no direct relevance to the functioning of K.V.K., but its personnel are supposed to popularize such schemes among villagers for taking financial support from such programmes. In the following paragraphs the details of a few important schemes have been given which have direct impact over the livelihoods of sample population.

### JAWAHAR GRAM SAMRIDHI YOJANA

7.264 The former scheme of Jawahar Rojgar Yojna renamed as Jawahar Gram Samridhi Yojna was started from the year 1999-2000 with the basic objective of creating community assets of permanent nature, thereby providing employment to local labour. The survey results show that out of 113 individuals 55 individuals [48.67 percent] are aware of the scheme while rest of 58 individuals [51.33 percent] have no knowledge about the scheme. The scheme is important from the view point of creating community asset that results in availability of employment opportunities. Awareness about this scheme will induce the villagers to assert their demand through Gram Panchayat to develop their area. The K.V.K. personnel may, during their field visits, publicize the utility of the scheme among the villagers.

## EMPLOYMENT ASSURANCE SCHEME

7.265 Started from the year 1997-98, the scheme aims at providing employment to rural population during lean season of agriculture thereby creating community assets. **The response to this scheme is somewhat encouraging as 44 individuals [38.93 percent] are aware about the scheme.**

## ESTABLISHMENT OF HAND LOOM UNITS

7.266 Under this scheme, the units having 5 to 10 looms are registered and loom-shed subsidy and margin money subsidy are given. **Only one person of our sample area is aware of the scheme. When even awareness is not there, there can hardly be any possibility of its implementation in our area of study.**

## ESTABLISHMENT OF SERICULTURE UNITS

7.267 Under this scheme the beneficiaries are given training on various aspects of sericulture activities to supplement their income. For this purpose Resham Kendras spread over in districts assume nodal responsibilities to train the beneficiaries and augment their infrastructure. **Only 2 individuals from our area of study are aware of the existence of such scheme [what to say of its implementation] when the scheme is so important for rural economy. The K.V.K. personnel in liaison with concerned district authorities may take-up a campaign for making villagers aware about the benefits of the scheme.**

## ESTABLISHMENT OF FAMILY BASED RURAL INDUSTRIAL UNITS

7.268 The scheme is implemented by the Madhya Pradesh Khadi and Gramodayog Board. Under this scheme the units pertaining to SC, ST and OBCs are given 90 percent subsidy on capital loan and remaining 10 percent loan is given by the banks. The level of awareness about this scheme is poor as 3 individuals [2.65 percent to total of 113 individuals] are aware about this scheme.

## MID DAY MEALS

7.269 The programme has proved to be an effective incentive for retention of school going children relating to primary education, specially the children coming from low income group. Under this programme, cooked meals are provided to the school going children. **The level of awareness of this scheme is encouraging as 95 individuals, which is 84.07 percent to total of 113 individuals, are aware about this scheme.**

## FREE SUPPLY OF TEXT BOOKS

7.270 Under this scheme all the students of primary standard [classes 1<sup>st</sup> to 5<sup>th</sup>] belonging to SC, ST and OBCs and students of classes 1<sup>st</sup> to 3<sup>rd</sup> standards belonging to general communities are given text books free of cost. As per our survey results 62 individuals [54.87 percent] are aware about the scheme while 51 individuals [45.13 percent] are not aware of the scheme. **Since the supply of text books free of cost is mandatory, the individuals unaware of the scheme are either persons having their wards above primary standards of education or the rate of drop-out is so high that they are not particular about the scheme. However, efforts both by persons of school education department and K.V.K. may reduce such extent of unawareness.**

## WOMEN SELF HELP GROUP

7.271 With view to ensure social and economic empowerment of women, self help groups [S.H.Gs.] are formed for making the women confident to face challenges on all fronts, be it social or economic. In this scheme, the members of the group deposit a part of their saving in the fund raised by the group and may take loan to meet their various social and economic obligations, subject to return of the amount with interest. In our area of study 100 individuals [88.50 percent] are aware of this scheme which, ofcourse, is very encouraging that indicates the awareness of individuals about the value of such institution. Unawareness aspect for 13 individuals may easily overcome by little more extension efforts by concerned government officials and persons of K.V.K.

## GRAMYA YOJNA

7.272 Under this scheme the poor women are given interest free loan upto Rs. 500.00 towards starting a small business. After repayment of the first loan within one year, second loan to the tune of Rs. 1500.00 is given. In our area of study, 49 number of individuals [43.36 percent] are aware of this scheme **which is not much satisfactory as the scheme is important from the view point of economic empowerment of women. A little more extension effort by the officials of Woman and Child Development may reduce the level of unawareness of 64 persons to negligible level.**

## AUSMATI YOJNA

7.273 With the objective of providing better medical assistance to the women belonging to the families living below the poverty line in rural areas, this scheme was started in the year 1999. **For this scheme also the extent of awareness by 75 individuals [66.37 percent] is not much satisfactory as the scheme has direct relevance to health status of poor women. Perhaps a wide awareness campaign is necessary so that more number of poor women may come forward for medical assistance.**

7.274 **In what follows an attempt has been made to summarise the details of individual particulars of adopted and cluster villages.**

- **The frame of the present part of the narration is 113 individuals which is 25 percent of the family members of 25 percent sample households belonging to adopted and cluster villages.**
- **The criteria for selection of individuals are – the persons should be the adult member of the family, he/she should be associated with any programme of the K.V.K., he/she should be literate – may be without having any formal education.**
- **The majority of 62 individuals are from Scheduled Tribe [ST] community that accounts for 54.87 percent to total of 113 individuals from adopted and cluster villages.**
- **The cent-percent sample individuals from our area of study are the followers of Hindu religion.**
- **The cent-percent awareness of the individuals about the K.V.K. in terms of its location and more importantly the services rendered by it is an important achievement of the K.V.K.**
- **Regarding knowledge about specific services, cent-percent sample individuals are aware of the vocational training while 98.23 percent individuals are aware**

- of F.L.D. and 92.92 percent individuals know about O.F.T. The impact of the K.V.K. services are obvious.
- Out of total of 113 individuals, 111 individuals [98.23 percent] are in regular contact with K.V.K. mainly because of the desire for adopting new technology [86.73 percent] and for plant protection [7.08 percent individuals].
  - Regarding implementation, 98.23 percent individuals have implemented the services of K.V.K. This is an achievement by it self.
  - Except for the subjects like agronomy and home science where 98.23 percent and 97.35 percent individuals have implemented the services rendered by K.V.K., in rest of the subjects viz. horticulture, animal husbandry, fishery, poultry, agro-forestry, organic farming, watershed activities and training of rural youth no implementation efforts have been done by the sample individuals.
  - Agronomy and the home science are the subjects for which satisfaction level is substantial. In subjects like horticulture, animal husbandry, poultry, fishery, organic farming, watershed activities and training of rural youth the satisfaction level is nil.
  - Regarding impact of K.V.K's. efforts over income enhancement, 99.12 percent individuals have given positive response which is an achievement in itself.
  - Regarding continuance of the services of K.V.K. 97.35 percent individuals have given positive response that justifies the laudable performance of the K.V.K.
  - It is worth considering to incorporate in the mandate of the K.V.K. the new subjects like production of by-products and marketing strategy of the product.
  - As regards utilization of enhanced income, 36.28 percent individuals have spent their enhanced income over purchase of agriculture implements.
  - Regarding impact of enhanced income over levels of education, 76.99 percent individuals have given positive response particularly in case of elementary education for both boys and girls, which, no doubt is an encouraging trend.
  - 87.61 percent to total of 113 individuals have reported about positive impact of enhanced income over health status that shows the awareness of sample population about value of keeping good health.

## **RESULTS OF SURVEY-INDIVIDUAL PARTICULARS-CONTROL VILLAGE**

- 7.275 In the following paragraphs an attempt has been made to record the reactions of 25 percent of individuals taken from control village of Bhargawan where there is no intervention of KVK. The Total number of family members of the 25 percent of the households in village Bercha is 45, the twenty five percent of which is 11 individuals. Therefore, the reactions of 11 number of individuals have been recorded to have a comparison with the reactions of individuals of adopted and cluster villages having direct intervention of KVK. The criteria for selection of individuals for control village are similar to that for adopted and cluster villages.
- 7.276 Like adopted and cluster villages, 9 individuals out of 11 individuals [81.82 percent] are from S.T. community, only two individuals are from O.B.C. community. Non of the persons are from S.C. and General Community. Cent-percent individuals are followers of Hindu religion.
- 7.277 Regarding awareness about the **existence of KVK**, four number of individuals [36.36 percent] of **Bhargawan village are aware of the its existence against the cent-percent awareness about K.V.K. in-terms of its location and services rendered by it by the individuals of adopted and cluster villages which seems obvious as in such cases the**



**intervention of K.V.K. is direct.** Awareness is the basic parameter that leads to positive impact of any activity over a long period of time. **The ultimate aim of any K.V.K. is to cover the entire district in terms of implementation of prevailing and new technology relating to agriculture and its allied activities that presupposes awareness about this organisation by the farming community of the district.** For this purpose the K.V.K. personnel of district Satna may organize meetings at Gram Panchayat level at least twice in a year inviting one representative from villages where there is no intervention of K.V.K. to make them aware about the utility of services rendered by the K.V.K.

- 7.278 Regarding satisfaction derived from per hectare yield of agronomical and horticulture crops, the cent-percent individuals of control village Bhargawa have expressed their dissatisfaction while for adopted and cluster villages this satisfaction level is 48.23 percent to total of 113 individuals. However for improving the per-hectare yield, 3 number of individuals from control village which is 27.27 percent to total of 11 individuals have suggested for organizing training for application of inputs, followed by 8 individuals [72.73 percent] for organizing training about water conservation.
- 7.279 Regarding satisfaction level of livestock and dairy activities cent percent individuals have expressed their dissatisfaction. **The suggestions forwarded** are making available the improved breed production facilities by 7 individuals [63.64 percent] followed by training on artificial insemination by 3 individuals [27.27 percent] and one individual [9.09 percent] has opined for making available the improved feed facilities. **It will be worth mentioning that even in cases of adopted and cluster villages the satisfaction level for livestock and poultry activities is negligible.**
- 7.280 As for poultry development 10 number of individuals [90.91 percent] have expressed dissatisfaction. **The important suggestion** forwarded is arrangement of improved caging facilities by 1 individual [9.09 percent]. **In case of adopted and cluster villages also the satisfaction level for this activity is not substantial.**
- 7.281 Regarding fishery development, again the level of dissatisfaction is cent-percent **supported by the suggestions** like supply of improved feed by 6 individuals [54.55 percent] followed by arranging training about use of improved implements by 5 individuals [45.45 percent] **It is worth mentioning** again that for adopted and cluster villages the level of satisfaction for this activity is nil.
- 7.282 Important information has been collected about adoption of home science activities for augmentation of family income. **Toy making** is one such activity where cent percent individuals have asked for training facility followed by **pickle preparation** by 7 individuals [63.64 percent]. **Training regarding baking activities** have been supported by 3 individuals [27.27 percent], followed by jute items by 2 individuals [18.18 percent] preparation papad/jam/jelly etc by 5 persons [45.45 percent] and food processing by 1 persons [9.09 percent]. It is worth mentioning that in case of adopted and cluster villages the positive response in favour of home science activities is substantial.
- Regarding training of rural youth for self employment, cent percent individuals have **suggested** for organizing training programme for **motor binding** which is very relevant for performing agricultural activities followed by 6 individuals in favour of training courses for repair of **diesel engine** that accounts for 54.55 percent to total of 11 sample individuals. For activities like **black smithy, carpentry, masonry and tailoring, and cycle/scooter repair** individuals to the tune of 2 [18.18 percent], 1 [9.09 percent], 3 [27.27 percent], 4 [36.36 percent] and 8 [72.73 percent] respectively have suggested for organizing training courses. It

will not be out of place to mention here that in case of adopted and cluster villages, no individual has shown any inclination for such activities regarding training of rural youth.

7.283 Regarding educational status of the sample individuals of control village, the survey results show that out of 11 individuals, 4 persons [36.36 percent] have reported positively about their male children attending the **elementary level of education** [primary + middle i.e. classes 1<sup>st</sup> to 8<sup>th</sup> standards] while the response from 7 individuals [63.64 percent] for this item are negative. More or less similar is the situation with girls wherein 5 number of individuals [45.45 percent] have given positive response while 6 number of individuals [54.55 percent] were negative in their responses. Similarly regarding boys and girls students of **secondary level of education**, i.e. from from classes 9<sup>th</sup> to 12<sup>th</sup> the cent percent.response is negative.

7.284 Regarding health status the following table presents a comparative picture between adopted and cluster villages on one side and the control village on the other;

Table No. 7.83

Comparative Status of Health Facilities Among Sample Individuals

Sl. No.	Item	Status of control village – percentage to total 11 sample individuals	Status of adopted and cluster villages percentage to 113 sample individuals
1	Hiring of services of medical personnel	-	40.71
2	Vaccination of children/ pregnant mother	27.27	33.63
3	Child nutrition	63.64	6.19
4	Female nutrition during gestation period	81.82	5.31
5	Adoption of family welfare measures	-	1.77

**Note – Only positive responses have been taken into account.**

7.285 The above table shows that except for the item of hiring of services of medical personal vaccination of children/women and adoption of family welfare measures where the positive response of individuals from adopted and cluster villages is higher than control village, **in rest of the health parameters the percentage positive responses of the individuals of control village are much higher than that of adopted and cluster villages that shows the relatively higher level of awareness among the sample individuals of control village regarding various health parameters.**

7.286 Regarding status of drinking water facilities, cent percent individuals have responded positively about availability of hand pumps as main source of drinking. Piped water supply is not in existence in the sample village which seems obvious as in villages in general this facility is seldom available. **In case of adopted and cluster villages also the majority of respondents have informed about hand pums as main source of drinking water in their villages.**

7.287 The table below shows the comparative level of awareness about the various welfare schemes between adopted/cluster villages and control village;

Table No. 7.84  
Comparative Levels of Awareness

Sl. No.	Name of the Scheme	Level of awareness in percentage for adopted/cluster villages [percent to total of 113 individuals]	Level of awareness in percentage for control village [percent to total of 11 individuals]
1	Jawahar Gram Samridhi Yojna	48.67	9.09
2	Employment Assurance Scheme	38.93	81.82
3	Establishment of Hand Loom Units	0.88	-
4	Establishment of Sericulture Units	1.77	-
5	Establishment of family based rural industrial Units	2.65	-
6	Mid-day Meals	84.07	90.91
7	Free supply of Text Books	54.87	9.09
8	Women Self Help Group	88.50	81.82
9	Gramya Yojna	43.36	18.18
10	Ausmati Yojna	66.37	90.91

**7.288** The above table shows that except for Employment Assurance Scheme and Mid-day meals, the level of awareness about other schemes is much higher in adopted/cluster villages as compared to control village. Regarding schemes like Establishment of Hand Loom Units, Establishment of Sericulture Units and Establishment of family based rural industrial Units the level of awareness among individuals of control village is nil while that for adopted and cluster villages the level of awareness is marginal. The validity of such schemes, therefore, is doubtful as since the awareness about these schemes are missing, the plight of their implementation may well be imagined.

**7.289** In what follows an attempt has been made to summarise the findings of individual particulars of the control village;

- The majority of 81.82 percent individuals are from S.T. community. Non of the persons are from S.C. and general community. Cent percent individuals are followers of Hindu religion.
- Regarding awareness about existence of K.V.K. 36.36 percent individuals are aware of its existence.
- Regarding satisfaction derived from per hectare yield of agronomical and horticulture crops the cent percent individuals from control village have expressed their dissatisfaction.
- Dissatisfaction level for activities like livestock and dairy and fishery is centy percent while for poultry 90.91 percent individuals have expressed their dissatisfaction.
- Regarding home science activities the positive response from individuals of control village is substantial.
- Similarly for training of rural youth the positive response of the individuals of control village is substantial.
- Regarding educational status 36.36 percent individuals have reported positively about their male children attenditng the elementary level of education. More or less similar is the situation for girls wherein 45.45 percent individuals have given positive response.
- Regarding health status the positive response from individuals is substantial.
- Regarding status of drinking water facilities cent percent individuals have responded positively about availability of hand pumps as main source of drinking water.
- As regards awareness about various welfare schemes the level of awareness for schemes like Employment Assurance Scheme, Mid-day Meals, Women Self Help Group and Ausmati Yojana is substantial.

## Chapter Eight

### KRISHI VIGYAN KENDRA - SHAHDOL

#### The Premise

8.1 The present chapter has been categorized into;

- General Particulars of the district
- Details of Krishi Vigyan Kendra based on secondary information
- Results of the survey

#### GENERAL PARTICULARS OF THE DISTRICT

8.2 District Shahdol is located in between 22.38<sup>0</sup> to 24.20<sup>0</sup> north latitude to 80.28<sup>0</sup> to 82.12<sup>0</sup> east longitude with total geographical area of 9485 squ.km constituting 3.08 percent of the total 308245 squ.km. area of the State.

8.3 The district has 1390 inhabited villages with 662 Gram Panchayats delegated with various powers of administration in view of 73<sup>rd</sup> constitutional amendment. The district has 9 number of Development Blocks that vouches for the expanse of rural area with 17 number of police stations for administration of law and order. The population, in general is law abiding since in worst of the nation wide turmoil, nothing untoward happened in the district.

8.4 The average annual rainfall of the district is 1302.4 mm mainly spread over between June to September. The average maximum temperature during summer is 41.6<sup>0</sup> celsius while average minimum temperature during winter is 9.2<sup>0</sup> celsius.

8.5 The total population of the district as per census 2001 is 1575303 which is 2.61 percent to total population of the State. Of the total population of the district the total rural population is 1174613 which is 74.56 percent to total population of the district while the urban population is 400690 constituting 25.44 percent to total district population. The fact shows the rural character of the district. The percentage of scheduled caste population to total population as per census 2001 is 7.36 while that for scheduled tribe population is 44.48 as against the State level percentage figures of 15.17 and 20.27 respectively. The percentage of workers engaged in agriculture in district Shahdol as per census 1991 is 67.08 to total workers that shows agriculture is the main occupation of district Shahdol.

8.6 The following indicators relating to agriculture will show the extent of agriculture related activities in district Shahdol.

Table No. 8.1  
Important Indicators Relating to Agriculture

Sl. No.	Indicators	District Shahdol	State of Madhya Pradesh
1	2	3	4
1	Percentage of forest area to total geographical area [ha]	32.48	26.65
2	Net cropped area as percent to total geographical area [ha]	38.99	49.02
3	Per-capita net cropped area [ha]	0.22	0.25
4	Per-capita gross cropped area [ha]	0.24	0.34
5	Percentage of double cropped area to net cropped area [ha]	19.18	35.49
6	Net area irrigated as percent to net cropped area [ha]	5.21	37.56
7	Gross area irrigated as percent to gross cropped area [ha]	4.37	28.54
8	Per-capita production of food-grains [Kg.]	178	266
9	Per hectare use of fertilizer [Kg.]	8.84	46.21
10	Gross value of agriculture produce-per hect. [Rs.]	7565	11968
11	Per hectare yield of agriculture produce [Kg.]*		
a)	Paddy	997	1058
b)	Wheat	771	1867
c)	Jowar	1134	1342
d)	Maize	1299	2072
e)	Gram	452	932
f)	Tuar	567	825
g)	Soybean	508	1132
12	Electrified villages as percent to total inhabited villages	93.59	97.04
13	Energised pump sets per thousand hectare	7	60

\*Figures relate to the year 2003-2004 [Final Forecast]

8.7 Regarding important indicators like net area irrigated as percent to net cropped area, percentage of double cropped area to net cropped area, per hectare use of fertilizer etc., the district Shahdol is far behind than state average with the result the per-hectare yield of most of the crops are less than the state average.

The district has immense forest wealth as the percentage of forest area to total geographical area is 32.48 as against the State average of 26.65 percent which is holding a promise for development of forest based economic activities in the area.

#### **DETAILS OF KRISHI VIGYAN KENDRA, SHAHDOL BASED ON THE SECONDARY INFORMATION**

8.8 Established in the year 1992, the K.V.K. is located in the Technical School Campus, Rewa Road, Shahdol. The institution is being run under the overall control of Jawahar Lal Nehru Krishi Vishwa Vidyalaya [J.N.K.V.V.], Jabalpur with Training Organiser as head of the institute. Against the total sanctioned strength of 16 number of staff members, the institution, at present has 6 number of scientific staff with one Training Organiser and two Training Associates followed by three filled-in posts of Technical Assistants against the sanctioned strength of five such personnel and four number of non-technical staff against the sanctioned strength of five number of non-technical personnel. Thus, at present, the total number of staff in position is 10 against the sanctioned strength of 16 persons. The number of staff in position though is fairly enough to carry on with the activities of K.V.K. but the filling-in of the all the posts will definitely add more efficiency in performance of technical functions.

- 8.9 At present the K.V.K. has got no administrative building of its own and the office is located in the building provided by the district Collector. The infrastructures like farmers hostel, threshing floor and demonstration units regarding dairy, poultry, farm pond for fishing are not in existence. Only a small unit for crop and agro-horticultural system is available which can hardly be termed as fair equipage.
- 8.10 The farm area of the K.V.K. is 14.89 hectares, out of which 10.52 hectares is cultivable without any irrigation facility. As on the date of the survey the institution has one number of four wheeler and one number of two wheeler adding efficiency to various functions being performed by the K.V.K.
- 8.11 The K.V.K. has adequate number of agriculture implements as detailed below;
1. Tractor – 1
  2. M.B. Plough –1
  3. Cultivator – 1
  4. Tractor drawn Ferti seed drill – 1
  5. Thresher – 1
  6. Trolley – 1
  7. Leveller – 1
- 8.12 These variety of implements are, more or less, sufficient to do the extension work with reasonable efficiency.
- 8.13 Regarding budget allocation, during the year 2001-2002 the total budget provision was Rs. 2.05 lakh against which the expenditure amounted to Rs. 1.87 lakh while for the year 2002-2003 the budget allocation was Rs. 4.10 lakh with expenditure to the tune of Rs. 3.64 lakh. Similarly during the year 2003-2004 against the budget allocation of Rs. 12.10 lakh the expenditure was to the tune of Rs. 7.56 lakh. Mostly the budget allocation was for recurring items like pay and allowances, P.O.L. and organizing FLD, OFT etc. The budget allocation for technical functions along with POL need to be enhanced.
- 8.14 The information regarding technical performance has been collected under the heads of;
- Vocational Training
  - In Service Training
  - Front Line Demonstration
  - On Farm Testing
- 8.15 In what follows an attempt has been made to present the details of above mentioned items.

## **VOCATIONAL TRAINING**

- 8.16 Vocational training is not only limited to subjects relating to agriculture but supposed to cover various subjects relating to activities allied to agriculture also. The table below shows the details;

Table No. 8.2  
Status of Vocational Training

Sl. No.	Subject	No. of trainings organised -2003-2004			Total no. of trainees 2003-2004
		Adopted Villages	Cluster Villages	Other Villages	
1	2	3	4	5	6
1	Crop Production	11	-	10	21
2	Agriculture Extension	6	-	-	6
3	Plant Protection	1	-	2	3
4	Veterinary Services	-	-	-	-
5	Home Science	-	-	-	-
6	Ag. Engineering	3	-	-	-
7	Training of Rural Youth for Self Employment				
a.	Crop Production	2	-	8	10
b.	Agriculture Extension	1	-	2	3
c.	Plant Protection	2	-	2	4
d.	Home Science	1	-	-	1
e.	Animal Science	1	-	-	1
	Total	28	-	24	49

Note : Other villages [Col. 5] mean those villages of the district where the training programmes of Agriculture. Department are imparted through K.V.K.

8.17 One fact has very clearly come out from the above table is that the cultivators are basically interested in enhancing productivity of agronomical crops with the result maximum number of 21 training programmes have been organised in adopted and other villages which is 42.86 percent of total of 49 number of training courses organised in the year 2003-2004 with maximum number of attendance of 21 number of trainees accounting for 42.87 percent of total of 49 number of trainees. The situation seems obvious as the cultivators are interested in enhancing their household income through improved farming practices over which they have control over resources backed by knowledge borne of years of experience. The complete absence of any training programme for horticulture, veterinary services and home science is a matter of concern as these are the areas which have immense promise for generation of income and employment in rural areas that arrest the tendency of migration during lean season of agriculture. The K.V.K. may make special efforts to organize training programmes on such subjects. Regarding training of rural youth for self employment, only 19 number of training courses have been organised in adopted and other villages attended by 19 number of trainees which is 38.77 percent to total number of 49 trainees attending the vocational training courses. The achievement is fair as it has normally been seen that in rural areas. The young persons are usually not much interested in such training activities due to absence of placement gurantee. **Complete absence of organisation of any training programme in cluster villages is a definite gap in performance.** Cluster villages are usually the peripheral villages of adopted villaghes where the technological impact of K.V.Ks. efforts are supposed to percolate through various forward linkages. Trainings organised in cluster villages give momentum to such percolation process. The K.V.K., Bhopal has organised 23 number of vocational training courses in areas of cluster villages which have made definite dent over the awareness levels of cultivators about new and prevailing technology relating to agriculture. **The K.V.K., Shahdol may organize vocational training courses among cluster group of villages in coming years.**

### IN SERVICE TRAINING

8.18 In-service training is provided to the field functionaries of the line departments of Agriculture, Veterinary, Horticulture and Forest. The following table shows the details of training provided;

Table No. 8.3  
Status of In-service Training

Sl. No.	Subject	No. of trainings organised in the year 2003-04		Total number of trainees 2003-04
		On campus	Off campus	
1	2	3	4	5
1	Crop Production	1	4	5
2	Agriculture Extension	4	2	6
3	Plant Protection	-	-	-
	<b>Total</b>	<b>5</b>	<b>6</b>	<b>11</b>

8.19 The position of organizing 11 number of training programmes though is satisfactory but attendance of 11 number of trainees in the year 2003-2004 is somewhat unsatisfactory. However, the trainees from the office of the Chief Executive Officer, Zila Panchayat, implementing the scheme of rural development pertaining to creation of community and individual assets which have direct impact over enhancement of household income, should have been invited. The role of such personnel is important to implement various programmes relating to training of rural youth which is one of the basic responsibilities of K.V.K. **Any programme of in-service-training should have duration of at least two days as usually the first day is practically lost awaiting for the arrival of the trainees. The K.V.K. scientists should have a constant liaison with the district collector to make such training programmes meaningful.**

#### FRONT LINE DEMONSTRATION

8.20 The special features of F.L.Ds. are;

- These demonstrations are conducted under the close supervision of the scientists of the K.V.K.
- Only newly released technologies or those likely to be release in near future are selected for conducting F.L.Ds.
- F.L.Ds. are organised in a block of two to four hectares of land involving all those farmers whose plots fall in the identified demonstration blocks.
- Only critical inputs and training are provided from the scheme budget. Remaining inputs are supplied by farmers themselves.
- The target audience of F.L.Ds. is both farmers and extension officers.
- The F.L.Ds. are supposed to generate data relating to factors leading to higher crop yields and constraints under various farming conditions.

8.21 The table below shows the number of F.L.Ds. conducted during the year 2003-04.

Table No. 8.4  
Status of Front Line Demonstrations

Sl. No.	Subjects	No. of demonstrations organised 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Pulses	26	-
2	Oil Seeds	60	-
3	Other than pulses and oilseeds	33	21
	<b>Total</b>	<b>119</b>	<b>21</b>



8.22 Since organizing F.L.Ds. is one of the most important functions of the K.V.K. as through this activity the various technologies regarding agriculture are tested on the farmers fields, the near absence of such demonstrations in cluster villages is a serious lapse.

## **ON FARM TESTING**

8.23 On farm testing is a part of adaptive research that takes into account existing technology and its application over defined areas and defined group of farmers.

The procedure of on farm testing has five steps viz.,

- Diagnosis
- Planning
- Experimentation
- Assessment/evaluation of results
- Recommendation and diffusion.

## **DIAGNOSIS**

In this step, an understanding of farmer's circumstances and practices is developed in order to understand the farming system, possible productive problems and offer possible solutions. It is a continuous process practiced in every cycle of research. Normally the Participatory Rural Appraisal [P.R.A.] technique is used for having an insight into the problems of farming communities.

## **PLANNING**

The planning involves setting-up of priorities in order to improve research efficiency in terms of research benefits/costs by identifying following kinds of problems;

- Problems causing large productive loss.
- Problems that occur frequently.
- Problems that affect many farmers and their major crops.

## **EXPERIMENTATION**

This step includes exploring production problems, testing possible solutions and demonstrating them on the farms.

## **ASSESSMENT**

Under this phase the results of on farm testing are analysed taking primarily into consideration the reactions and opinions of farmers. The results of the assessments are then used to plan future research.

## **RECOMMENDATION AND DIFFUSION**

On the basis of on farm testing the researchers formulate recommendations/ non-recommendations for demonstration on larger area. The diffusion of new technology is done mainly by the **farmer's who** once convinced of the benefits of new technology advise their fellow cultivators to adopt the system.

Against this background, the status of O.F.T. in the year 2003-2004 has been shown in the following table;

Table No. 8.5  
Status of On Farm Testing

Sl. No.	Subject	No. of O.F.Ts. organised 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Agronomy	50	-
2	Horticulture	15	-
	<b>Total</b>	<b>65</b>	<b>-</b>

8.24 The organisation of only 65 number of on farm testing in one year that too only in adopted villages is not very fair, particularly when this activity is most important for implementation of prevailing technology relating to agriculture. The matching figure of K.V.K., Bhopal is organisation of 200 number of O.F.Ts. equally distributed between adopted and cluster villages. **The K.V.K., Shahdol may look into the matter and may attempt to organize more number of O.F.Ts. covering cluster villages as well in coming years.**

8.25 Besides organizing training courses as laid down in the mandates of K.V.K. i.e. Vocational Training, In Service training, Front Line Demonstration and On Farm Testing, the K.V.K., Shahdol has also organised other training programmes in liaison with the offices of district administration. The table below shows the details;

Table No. 8.6  
Record of Other Training Courses

Sl. No.	Topic	Duration	No. of participants		
			2001-2002	2002-2003	2003-2004
1	2	3	4	5	6
1	Plant Protection	54 days	7	8	11
2	Agr. Extension	41 days	7	5	6
3	Plant Protection	17 days	3	-	1
4	Home Science	5 days	2	1	-
	Total	-	19	14	18

8.26 The total number of 51 trainees participating on four subjects over the years 2001 to 2004 is somewhat fair. The duration of training spread over in respective years is somewhat exceptional as in case of most of other K.V.Ks. the duration is normally for 2 days.

8.27 One of the important functions of the K.V.K. is to conduct specific research to improve the quality of agriculture produce, the details of which are given below;

Table No. 8.7  
Status of Specific Research

	Topic of Research	Year	Impact Over			
			Production	Pest Control	Improved Animal Breed	Others [Specify]
1	2	3	4	5	6	7
1	Fertilizer requirement of deshi paddy – upland	1998-99 1999-2000	Peohi variety was replaced by 50%	-	-	-
2	Fertilizer requirement of deshi paddy – local	”	”	-	-	-
3	Wheat rainfed	”	-			

8.27 The impact of specific research is satisfactory as indicated by their effect on production. Since there is no regular flow of fund for research, more number of such research activities could not have been taken.

8.28 Each K.V.K. is supposed to hold the meeting of Scientific Advisory Committee twice in a year for performing following functions;

- Providing necessary guidance and leadership in developing infrastructure facilities and thereby supporting the Kendra to fulfil its objectives.
- Reviewing of the annual and five year plans of the Kendra.
- Reviewing the progress of the activities and achievements and offering necessary guidance/suggestions to improve the functioning of the Kendra.
- Approval of the Annual Accounts of the Kendra before the same is sent to the Chartered Accountant/Statutory Auditor for audit.
- Adoption of the Statement of Audited Accounts before the same is sent to the Council.
- Approval of the recommendations of the Recruitment/Selection committee for appointment of staff on vacant posts.

The Scientific Advisory Committee will consist of following members;

- |     |  |                  |
|-----|--|------------------|
| 1.  | Head of the host institution   | Chairperson      |
| 2.  | Director, Extension of concerned SAU   | Member           |
| 3.  | Zonal Coordinator of the concerned zone  | Member           |
| 4.  | Representative of ICAR Instt./ICAR Regional Research Station if located in the district or nearby  | Member           |
| 5.  | Associate Director, Research & Extension of the Zonal Research Station in which KVK is located   | Member           |
| 6.  | District officers of the line departments such as Agriculture, Horticulture, Animal Husbandry, Soil conservation, Social/Agroforestry, Sericulture, Fisheries, Irrigation, Social Welfare, Small Scale Industries etc. | Members          |
| 7.  | Representative of the Lead Bank of the District  | Member           |
| 8.  | Farm Radio Officer of the AIR in which KVK is located  | Member           |
| 9.  | Representative of Doordarshan Centre in which KVK is located   | Member           |
| 10. | Two representatives of the farmers - one small and one big nominated by the Head of the Institution  | Member           |
| 11. | Two representatives of Farm Women nominated by Head of the Institution   | Members          |
| 12. | Training Organiser, KVK  | Member Secretary |

8.29 The K.V.K., Shahdol has arranged the meeting of Scientific Advisory Committee once in the year 2003-2004.

8.30 The K.V.K., Shahdol has continuously interacted with district administration, three-tier institution of Panchayati Raj and progressive cultivators of the district and took valuable guidance from them. Publicity measures like organizing Kisan Melas, Field Days, use of Audio-Visual Aids, arranging T.V. Interviews and Radio talks were attempted to spread the knowledge about utility of K.V.K. among rural population.

## RESULTS OF THE SURVEY – VILLAGE PARTICULARS

8.31 The study has covered sixty number of villages at the rate of ten number of villages per K.V.K. with following bifercations;

- Three number of Adopted Villages
- Six number of Cluster Villages
- One number of Control Village

The bifurcation as shown above is common to all the six K.V.Ks. covered under the study. The table below shows a few important demographic details of the selected villages of K.V.K., Shahdol;

Table No. 8.8  
Demographic Particulars

Sl. No.	Name of the Village	Name of the Dev. Block	Total population Census 2001	Of which		Proportion of S.C. population [%]	Proportion of S.T. population [%]	Literacy rate [%]	Household size
				Males Census 2001	Females Census 2001				
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Baaruka	Sohagpur	1276	644	632	0.9	67.3	32.3	5
2	Antara	Sohagpur	725	373	352	1.4	64.4	32.5	4
3	Nipaniya	Sohagpur	998	503	495	2.3	51.9	61.0	5
<b>Total – I</b>			<b>2999 [53.67]</b>	<b>1520 [53.48]</b>	<b>1479 [53.86]</b>	-	-	-	-
<b>CLUSTER VILLAGES</b>									
4	Chhatarpur	Sohagpur	146	69	77	14.4	80.1	55.5	6
5	Antari	Sohagpur	241	119	122	-	98.3	19.6	6
6	Simariya	Sohagpur	140	67	73	-	94.3	18.3	5
7	Katahari	Sohagpur	374	195	179	-	68.4	36.0	4
8	Purnia	Sohagpur	442	222	220	-	43.2	48.2	5
9	Jhagraha	Sohagpur	987	512	475	-	68.0	43.7	5
<b>Total – II</b>			<b>2330 [41.70]</b>	<b>1184 [41.66]</b>	<b>1146 [41.73]</b>	-	-	-	-
<b>CONTROL VILLAGE</b>									
10	Kerhai	Sohagpur	259	138	121	-	38.3	57.0	4
<b>Total – III</b>			<b>259 [4.63]</b>	<b>138 [4.86]</b>	<b>121 [4.41]</b>	-	<b>38.3</b>	<b>57.0</b>	<b>4</b>
<b>Grand Total I+II+III</b>			<b>5588 [100.00]</b>	<b>2842 [100.00]</b>	<b>2746 [100.00]</b>	-	-	-	-

Source – Census 2001

Note – Figures in brackets show percentage to total.

8.32 The **total population** of the ten identified villages as per census – 2001 is 5586 which is **0.48 percent** to total rural population of district Shahdol. The adopted villages cover 53.67 percent of population as compared to total population of ten number of identified villages covered under the study while for the cluster villages this percentage is 41.70 and for control village, the percentage coverage is 4.63. **Population wise largest village** is Baruka [adopted village with population of 1276 persons while the smallest village is Simariya [cluster village with population of 140 persons]. Except for the villages Chhatarpur, Antari and Simariya where female population is more than male population, **in rest of the seven number of villages** the trend is otherwise. In all the identified ten number of villages the percentage of S.T. population is more than S.C. population. The **literacy rate** that ranged between 19.6 percent for village. Antari [cluster village] to 61.0 percent for village Nipaniya

[adopted village] is close to the district percentage literacy level of 58.71 and State percentage literacy level of 63.74. **One very startling fact as revealed by above information is that even with substantial tribal population in identified villages covered under the study, the percentage literacy is satisfactory thus defying one of the fixed notions that areas with substantial tribal population usually have low literacy rate. The extensive literacy campaign initiated by the government has thus started showing results as the tribals have started understanding the value of literacy, particularly in our area of study.**

## WORK FORCE

8.33 An analysis of the information regarding workforce is important as it gives an idea of persons engaged in various occupations along with the extent of dependent population not pursuing any work. The table below shows the details;

Table No. 8.9  
Status of Work Participation

Sl. No	Name of the Village	Work participation rate [%]			Proportion of main workers [%]			Proportion of Marginal workers [%]			Proportion of Non-workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Baaruka	39.3	51.4	27.1	14.8	26.1	3.3	24.5	25.3	23.7	60.7	48.6	72.9
2	Antara	37.8	46.9	28.1	36.7	46.1	26.7	1.1	0.8	1.4	62.2	53.1	71.9
3	Nipaniya	37.5	50.3	24.4	10.8	19.3	2.2	26.7	31.0	22.2	62.5	49.7	75.6
<b>CLUSTER VILLAGES</b>													
4	Chhatarpur	42.5	42.0	42.9	10.3	20.3	1.3	32.2	21.7	41.6	57.5	58.0	57.1
5	Antari	58.8	62.2	51.6	7.5	15.1	0.0	49.4	47.1	51.6	43.2	37.8	48.4
6	Simariya	52.9	62.7	43.8	43.6	61.2	27.4	9.3	1.5	16.4	47.1	37.3	56.2
7	Katahari	40.6	54.9	25.1	31.3	46.7	14.5	9.4	8.2	10.6	59.4	45.1	74.9
8	Purnia	50.0	57.7	42.3	44.3	54.5	34.1	5.7	3.2	8.2	50.0	42.3	57.7
9	Jhagraha	44.2	53.3	34.3	26.1	35.4	16.2	18.0	18.0	18.1	55.8	46.7	65.7
<b>CONTROL VILLAGE</b>													
10	Kerhai	50.2	57.2	42.1	0.0	0.0	0.0	50.2	57.2	42.1	49.8	42.8	57.9

Source – Census 2001

8.34 The work participation rate that ranged between 37.5 percent in village Nipaniya [adopted village] to 58.8 percent in village Antari [cluster village] is in general more among males than females. For six number of villages the proportion of marginal workers is much low as compared to the proportion of main workers while for four number of villages viz. Baaruka, Nipaniya, Chhatarpur and Antari a reverse trend is visible which shows that in these villages other avenues of employment besides marginal employment generated by agriculture also exist. In general the proportion of female marginal workers is more than that of males which is rather obvious as the females do odd jobs in their spare time after completing household obligations. Since our area of study is predominated by tribal population, higher per centage of female marginal workers is somewhat matching to the trend as in the tribal communities females also do the work to support the household.

8.35 Regarding non-workers that ranged between 43.2 percent in village Antari [cluster village] to 62.5 percent in village Nipaniya [adopted village] presents a dismal picture as it shows higher percentage of dependent population consisting of children, old person, infirms and unemployed who are not in a position to contribute practically anything towards family income.

8.36 The table shows the occupational distribution of the population residing in ten number of village covered under the study.

Table No. 8.10  
Occupational Distribution

Sl. No	Name of the Village	Proportion of Cultivators to total Workers [%]			Proportion of Agr. Labourer to total workers [%]			Proportion of workers in household industries to total workers [%]			Proportion of other workers to total workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Baaruka	6.6	9.7	0.6	55.0	41.7	80.7	0.2	0.3	0.0	38.2	48.3	18.7
2	Antara	22.7	34.3	16.2	17.5	14.3	23.2	0.7	1.1	0.0	54.0	50.3	60.6
3	Nipaniya	16.6	21.7	5.8	54.0	41.1	81.0	1.1	1.6	0.0	28.3	35.6	13.2
<b>CLUSTER VILLAGES</b>													
4	Chhatarpur	17.7	34.5	3.0	69.4	37.9	97.0	0.0	0.0	0.0	12.9	27.6	0.0
5	Antari	13.1	24.3	0.0	70.8	48.6	96.8	0.0	0.0	0.0	16.1	27.0	3.2
6	Simariya	25.7	23.8	28.1	36.5	31.0	43.8	0.0	0.0	0.0	37.8	45.2	28.1
7	Kathari	51.3	59.8	31.1	31.6	25.2	46.7	0.7	0.0	2.2	16.4	15.0	20.0
8	Purnia	35.3	43.8	23.7	31.7	21.9	45.2	3.2	2.3	4.3	29.9	32.0	26.9
9	Jhagraha	17.0	25.3	3.1	55.3	41.4	78.5	0.7	0.4	1.2	27.1	33.0	17.2
<b>CONTROL VILLAGE</b>													
10	Kerhai	40.0	41.8	37.3	60.0	58.2	62.7	0.0	0.0	0.0	0.0	0.0	0.0

Source – Census 2001

8.37 Agriculture is the main occupation of the ten number of identified villages covered under the study as the combined average percentage of cultivators and agriculture labour is 72.78 to total workers. In general the proportion of agriculture labour to total worker is more than proportion of cultivators to total workers which is not an encouraging situation as such type of workers are prone to migration during lean or adverse conditions of agriculture. In general the proportion of male cultivators to total workers is more than that of females **except in village Simariya [cluster village] where percentage of female cultivators is 28.1 as against 23.8 percent of male cultivators. In case of agriculture labour percentage of female participation in general is more than male participation which seems natural as in villages with substantial tribal population where the work culture among females is very common-at times more than even males.** The proportion of household workers to total workers is far from being satisfactory that ranged between 0.2 percent in village Baaruka to 1.1 percent in village Nipaniya. One of the important causes of rural poverty is absence of secondary occupations which give household income support particularly in agrarian economy. It also reduces pressure on land with the result the occupation of agriculture becomes more viable. The proportion of other workers to total workers that ranged between 0.0 percent in village Kerhai [control village] to 54.0 percent in village. Antara [adopted village] is quite substantial which, in general, shows the existence of other mix of employment opportunities, partly contributed by the various welfare schemes of the government, in ten numbr of identified villages covered under the study.

## LAND USE DETAILS

8.38 The table below shows the land use details of the ten identified villages covered under the study;

Table No. 8.11  
Land Use Details In hectare

Sl. No.	Name of the Village	Total geographical area	Gross cropped area	Forest	Not available for cultivation	Cultivable waste	Irrigation				Total irrigated area	Total unirrigated
							Canal	Pond	Wells	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Baaruka	346	303 [87.57]	-	43	20	-	-	1	1	2 [0.58]	281
2	Antara	394	210 [53.30]	143	41	4	-	-	3	4	7 [3.33]	199
3	Nipaniya	662	364 [54.98]	263	35	1	-	-	15	5	20 [5.49]	343
<b>Adopted Village I</b>		1402	877 [62.55]	406	119	25	-	-	19	10	29 [3.31]	823
4	Chhatarpur	255	237 [92.94]	-	18	22	-	-	-	1	1 [0.42]	214
5	Antari	273	211 [72.91]	54	8	53	-	-	4	-	4 [1.90]	154
6	Simariya	183	161 [87.98]	-	22	62	-	-	1	5	6 [3.73]	93
7	Kathari	496	340 [68.54]	129	27	23	-	-	19	-	19 [5.59]	298
8	Purnia	190	176 [92.63]	-	14	10	-	-	2	8	10 [5.68]	156
9	Jhagraha	196	185 [94.39]	-	11	30	-	-	3	13	16 [8.65]	139
<b>Cluster Village II</b>		1593	1310 [82.23]	183	100	200	-	-	29	27	56 [4.27]	1054
10	Kerhai	697	170 [24.39]	517	10	47	-	-	-	7	7 [4.12]	116
<b>Control Village III</b>		697	170 [24.39]	517	10	47	-	-	-	7	7 [4.12]	116
<b>Total – I+II+III</b>		3692	2357 [63.84]	1106	229	272	-	-	48	44	92 [3.90]	1993

Source – Census, 2001

Note – Col. –4 = Figures in brackets show percentage to total geographical area.

Col. – 12 = Figures in brackets show percentage to gross cropped area.

8.39 The gross cropped area is 63.84 percent to total geographical area that confirms the basic fact that main occupation of these villages is agri culture. The survey area is also rich in forest resources as 29.96 percent area to total geographical area is under forest.

8.40 Regarding irrigation the percentage of gross irrigated area to gross cropped area is only 3.90 with breack-up of 3.31 percent for adopted villages, 4.27 percent for cluster villages and 4.12 percent for control village. Evidently the status of irrigation is quite unsatisfactory.

8.41 The cultivable waste land that provides a promise for expanding agriculture activities is 272 hectares in ten number of identified villages which is 6.87 percent to total geographical area assuring the fact that through the intervention of K.V.K. the expansion of agricultural work will be possible.

## RURAL ELECTRIFICATION

8.42 The table below shows the details;

Table No. 8.12  
Status of Rural Electrification

Sr. No.	Name of the village	Village Electrified		Regular supply		If irregular supply actual hrs. of supply
		Yes	No	Yes	No	
1	2	3	4	5	6	7
1.	Baaruka	1	0	0	1	12
2.	Antara	1	0	0	1	12
3.	Nipaniya	1	0	0	1	8
	<b>Adopted Village</b>	3	0	0	3	
4.	Chhatarpur	1	0	0	1	10
5.	Antari	1	0	0	1	18
6.	Simariya	1	0	0	1	10
7.	Katahari	1	0	0	1	12
8.	Purnia	1	0	0	1	12
9.	Jhagraha	1	0	0	1	12
	<b>Cluster Village</b>	6	0	0	6	
10	Kerhai	1	0	0	1	12
	<b>Control Village</b>	1	0	0	1	
	<b>Total</b>	10	0	0	10	

- 8.43 The above table shows that all the ten villages covered under the study are electrified with irregular power supply situation. The power supply for most of the villages is 12 hours a day.
- 8.44 The impact of rural electrification is directly visible over number of pump-sets energized. The table below shows the details;

Table No. 8.13  
Status of Pump Sets Energised

Sr. No.	Name of the village	Pump set energized	
		Electricity (No.)	Diesel (No.)
1	2	3	4
1.	Baaruka	15	7
2.	Antara	5	6
3.	Nipaniya	15	10
	<b>Adopted Village</b>	35	23
4.	Chhatarpur	5	0
5.	Antari	3	3
6.	Simariya	3	4
7.	Katahari	10	8
8.	Purnia	5	8
9.	Jhagraha	12	6
	<b>Cluster Village</b>	38	29
10	Kerhai	2	4
	<b>Control Village</b>	2	4
	<b>Total</b>	75	56

- 8.45 The total number of pump sets energized is 131 [as on the date of survey] which is 4.57 percent of total number of pump sets energized for district that stands at 2865 for the year 1999-2000. It is worth mentioning here that for district Shahdol the number of energized pump set per thousand hectare is 7 as against the state average of 60.



## HOUSEHOLD INDUSTRIAL UNITS

8.46 The existence of only 2 household industrial units in the sample area of our study is not very peculiar as such units are generally not found in rural areas of the state.

## COOPERATIVES

8.47 Formation of primary level cooperative societies as reflected in plan documents, basically aims at improving the socio-economic status of the weaker section of society and in turn, arrest the tendency of their exploitation. The table below shows the status of existence of cooperative societies in our area of study.

Table No. 8.14  
Cooperative Societies

Sr. No	Name of the village	Agricultureco-operative credit society	Fishermen co-operative society	Milk co-operative. society	In number	
					Co-operative. marketing society	Other specify
1	2	3	4	5	6	7
1.	Baaruka	0	0	0	1	0
2.	Antara	0	0	0	0	0
3.	Nipaniya	0	0	0	0	0
	<b>Adopted Village</b>	0	0	0	1	0
4.	Chhatarpur	0	0	0	0	0
5.	Antari	0	0	0	0	0
6.	Simariya	0	0	0	0	0
7.	Katahari	0	0	0	0	0
8.	Purnia	0	0	0	0	0
9.	Jhagraha	0	0	0	0	0
	<b>Cluster Village</b>	0	0	0	0	0
10	Kerhai	0	0	0	0	0
	<b>Control Village</b>	0	0	0	0	0
	<b>Total</b>	0	0	0	1	0

8.48 The existence of only one cooperative society in village Baaruka [adopted village] is far from being satisfactory.

8.49 Present level and prospect of future development of any area can fairly be assessed by the extent of availability of basic and infrastructural facilities in and around the villages. In what follows an attempt has been made to show the availability of such facilities in ten number of villages covered under the study.

## BASIC FACILITIES

8.50 The table below shows the location of basic administrative facilities within and around the ten villages identified for the study;

Table No. 8.15  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	District head quarter away than village KM	Tahsil head quarter		Block head quarter	
			Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	3	4	5	6	7
1.	Baaruka	9		7		7
2.	Antara	10		12		12
3.	Nipaniya	10		10		10
	<b>Adopted Village</b>					
4.	Chhatarpur	7		7		7
5.	Antari	15		16		16
6.	Simariya	15		14		14
7.	Katahari	15		15		15
8.	Purnia	16		12		12
9.	Jhagraha	10		12		12
	<b>Cluster Village</b>					
10	Kerhai	15		12		12
	<b>Control Village</b>					
	<b>Total</b>	10	0	10	0	10

Table No. 8.15 [Contd...]  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	Gram Panchayat		Police Station/sub station		Forest post	
		Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	8	9	10	11	12	13
1.	Baaruka	0			7		5
2.	Antara		1		10		5
3.	Nipaniya		2		10	0	
	<b>Adopted Village</b>						
4.	Chhatarpur		2		7		3
5.	Antari		2		12		5
6.	Simariya		1		14		4
7.	Katahari		2		15		2
8.	Purnia		1		14		4
9.	Jhagraha	0			8		5
	<b>Cluster Village</b>						
10	Kerhai		10		12		2
	<b>Control Village</b>						
	<b>Total</b>	2	8	0	10	1	9

8.51 For all the identified ten villages the location of district headquarter is away from the village. Similar is status of distance for tahsil and block headquarter. Normally such distance factor regarding location of important administrative units has some adverse effect on socio-economic development of any area since the officials who matter remain slightly unaware about the problems of the area as their visits to such habitates are usually infrequent. However, location of Gram Panchayat within and easy distance of villages is somewhat encouraging as the villagers have sufficient scope of remaining aware about the developmental activities being performed by Gram Panchayat. For most of the village the location of police station is within accessible distance ensuring, to some extent, safety of the inhabitants of identified ten number of villages.

## INFRASTRUCTURAL FACILITIES - ROADS

8.52 Roads are one of the basic infrastructures required for development of perhaps all the socio-economic parameters relating to human development. The status of backwardness of animal husbandry sector and horticulture in rural areas is mainly attributed to the absence of link roads as such products are perishable in nature requiring quick transport for sale in nearby big markets. Perhaps basic cause of the location of poultry and milk farms in nearby cities/towns is the availability of road facility for quick transport of the product in nearby market where even cold storage facilities are available. The table below shows the details;

Table No. 8.16

### Road Infrastructure

Sr. No.	Name of the village	Fair weather road		Kharamra road within the village
		Within the village 0 Km	Away from the village Km	
1	2	3	4	5
1.	Baaruka	0		-
2.	Antara		2	-
3.	Nipaniya		4	-
	<b>Adopted Village</b>			
4.	Chhatarpur		3	-
5.	Antari		4	-
6.	Simariya		2	-
7.	Katahari		2	-
8.	Purnia		2	0
9.	Jhagraha	0		-
	<b>Cluster Village</b>			
10	Kerhai		4	-
	<b>Control Village</b>			-
	<b>Total</b>	2	8	1

Table No. 6.16 [Contd...]

## Road Infrastructure

Sr. No.	Name of the village	Link road to all weather road		All weather road	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	6	7	8	9
1.	Baaruka	0		0	
2.	Antara		1		1
3.	Nipaniya	0		0	
	<b>Adopted Village</b>				
4.	Chhatarpur	0		0	
5.	Antari		3		3
6.	Simariya	0			3
7.	Katahari	0		0	
8.	Purnia		3		5
9.	Jhagraha	0			3
	<b>Cluster Village</b>				
10	Kerhai	0			4
	<b>Control Village</b>				
	<b>Total</b>	7	3	4	6

**8.53** The information contained in the above table reveals a not very satisfactory status of availability of road infrastructure in ten identified villages covered under the study. In only 2 villages fair weather roads and only in one village Kharanja road exist. Link roads to all weather roads exist only in seven number of villages and for other three villages the facility is within easy reach.

Infrastructural Facilities - Railway Station, Bus Stand/Bus Stop/  
Post Office/S.T.D. Booth

8.54 The table below shows the details;

Table No. 8.17

## Facilities Regarding Railway Station, Bus Stand, Bus Stop, Post Office, STD Booth

Sr. No.	Name of the village	Railway station		Bus stand/Bus stop	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6
1.	Baaruka		9	0	
2.	Antara		10		1
3.	Nipaniya		10	0	
	<b>Adopted Village</b>				
4.	Chhatarpur		7		2
5.	Antari		12		12
6.	Simariya		15		3
7.	Katahari		15		3
8.	Purnia		10		10
9.	Jhagraha		8		5
	<b>Cluster Village</b>				
10	Kerhai		13		1
	<b>Control Village</b>				
	<b>Total</b>	0	10	2	8

Table No. 8.17 [Contd...]

## Facilities Regarding Railway Station, Bus Stand, Bus Stop, Post Office, STD Booth

Sr. No.	Name of the village	Post office		STD booth	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6
1.	Baaruka		2		2
2.	Antara		3		3
3.	Nipaniya		2		2
	<b>Adopted Village</b>				
4.	Chhatarpur		4		4
5.	Antari		5		5
6.	Simariya		4		4
7.	Katahari		2		2
8.	Purnia		4		4
9.	Jhagraha		2		2
	<b>Cluster Village</b>				
10	Kerhai		4		4
	<b>Control Village</b>				
	<b>Total</b>		10		10

8.55 For all the ten sample villages the railway station is located for away from the village. In two villages the bus stand/bus stop is located within the village and in rest of the eight villages these facilities are within the easy reach of the villagers. Similar is the situation with facilities like post office and STD booth etc.

### INFRASTRUCTURAL FACILITIES – AGRICULTURE MARKETING, FAIR PRICE SHOP, COLD STORAGE

8.56 Fair return to agriculture produce, to a great extent, is ensured by the availability of marketing facilities like mandi yards, cold storage facilities to avoid distress selling which are as important as making provision for agriculture inputs for enhancement of agriculture production. The table below shows the details of the availability of such facilities within and around the ten number of selected villages covered under the study.

Table No. 8.18

## Status of Agriculture Marketing, Fair Price Shops and Cold Storage

Sr. No	Name of the village	Regular market		Weekly market		Mandi	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Baaruka		7		7		9
2.	Antara		10		10		10
3.	Nipaniya		10		10		10
	<b>Adopted Village</b>						
4.	Chhatarpur		7		7		8
5.	Antari		12		12		12
6.	Simariya		14		14		14
7.	Katahari		15		15		15
8.	Purnia		10		10		10
9.	Jhagraha		8		8		8
	<b>Cluster Village</b>						
10	Kerhai		12		12		12
	<b>Control Village</b>						
	<b>Total</b>		10		10		10

Table No. 8.18 [Contd...]  
Status of Agriculture Marketing, Fair Price Shops and Cold Storage

Sr. No.	Name of the village	Sub-Mandi		Fair Price Shop		Cold Storage	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12	13	14
1.	Baaruka		9	0			6
2.	Antara		10		1		11
3.	Nipaniya		10	0			10
	<b>Adopted Village</b>						
4.	Chhatarpur		8	0			7
5.	Antari		12		2		15
6.	Simariya		14		1		13
7.	Katahari		15		2		15
8.	Purnia		10		1		11
9.	Jhagraha		8	0			12
	<b>Cluster Village</b>						
10	Kerhai		12	0			9
	<b>Control Village</b>						
	<b>Total</b>		10	5	5		10

8.57 Exept for the facility of fair price shops, in non of the identified ten villages any of the facilities as shown above exist withIN the geographical limit of the Villages.

#### AGRO BASED INDUSTRIAL UNITS

8.58 Agro-based industrial units are important value additons in rural areas taking care of unemployment and under employment by providing sustainable income and thereby reducing the pressure on and. The table below shows the present status of agro-based industrial units in our sample villages;

Table No. 8.19  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Flour mill		Oil mill		Dal mill	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Baaruka		1		7		9
2.	Antara		1		8		10
3.	Nipaniya	0			5		10
	<b>Adopted Village</b>						
4.	Chhatarpur		2		8		8
5.	Antari		2		10		15
6.	Simariya		1		8		15
7.	Katahari		2		3		15
8.	Purnia		1		8		10
9.	Jhagraha	0			8		11
	<b>Cluster Village</b>						
10	Kerhai	0			12		11
	<b>Control Village</b>						
	<b>Total</b>	3	7		10		10

Table No. 8.19 [Contd...]  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Saw mill		Repair of agr. implements	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12
1.	Baaruka		6		7
2.	Antara		10		10
3.	Nipaniya		10		8
	<b>Adopted Village</b>				
4.	Chhatarpur		5		6
5.	Antari		10		15
6.	Simariya		14		14
7.	Katahari		15		15
8.	Purnia		8		8
9.	Jhagraha		12		10
	<b>Cluster Village</b>				
10	Kerhai		9		8
	<b>Control Village</b>				
	<b>Total</b>		10		10

- 8.59 The above table shows that except for flour mills non of the other industrial units like oil mill, dal mill and saw mill are located within the villages identified for the study. In case of flour mills, 3 number of villages have such units located within their geographical limits while in 7 villages the locational distance is within manageable limits not exceeding 2 kms. **The villages like Baaruka and Jhagraha having population of 1276 and 987 persons respectively may have flour mills and repair of agriculture implements.**

## **SOCIAL INPUTS – EDUCATION**

### **ELEMENTARY EDUCATION – PRIMARY LEVEL**

- 8.60 The Directive Principles of Constitution of India envisages provision of free and compulsory education to all children upto the age of fourteen years of age before the commencement of 21<sup>st</sup> century. Now that the 21<sup>st</sup> century has set in, fresh dead lines have been drawn. The goals of the Universalisation of Elementary Education [U.E.E.] Programme are;

- Universal access to primary schooling facility within a radius of one km and a middle school within a radius of at least 3 kms.
- Universal enrolment of children of age group of 6 to 14 years.
- Universal retention of all enrolled children till they complete eight years of elementary schooling.

Against this background, the information has been collected from sample villages. The table below shows the details of primary level of education.

Table No. 8.20  
Status of Primary Level of Education

Sr. No.	Name of the village	Primary School					Non formal education	
		Within the village 0 km	Within 1 km	Within 2 km	Within 3 km	> 3 km	Within the village 0 km	Away from the village km
1	2	3	4	5	6	7	8	9
1.	Baaruka	0						8
2.	Antara	0						12
3.	Nipaniya	0						10
	<b>Adopted Village</b>							
4.	Chhatarpur	0						999
5.	Antari				3			15
6.	Simariya	0						12
7.	Katahari	0						999
8.	Purnia	0						10
9.	Jhagraha	0						999
	<b>Cluster Village</b>							
10	Kerhai	0						10
	<b>Control Village</b>							
	<b>Total</b>	9			1			10

8.61 The above table shows that with the exception of village Antari [cluster village] where the primary school is located at distance of within 3 kms, in rest of the nine number of villages the facility of primary school is available within the village periphery. One of the reasons of high literacy percentage in the villages covered under the study is locational advantage of this facility. Village Antari, with total population of 241 persons might not be having viability of running a primary school on sustainable basis, may be considered by the district administration for opening at least a non-formal education centre meant for working children who can not attend the regular primary educational institution.

#### ELEMENTARY EDUCATION–MIDDLE LEVEL AND ADULT EDUCATION

8.62 The table below shows the details;

Table No. 8.21  
Status of Middle Level and Adult Education

Sr. No.	Name of the village	Middle School			Adult Education			
		In the village 0 km	Within 5 km	More than 5 km	Within 1 km	Within 2 km	Within 3 km	> 3 km
1	2	9	10	11	11	12	13	14
1.	Baaruka		1					10
2.	Antara	0						12
3.	Nipaniya		3					12
	<b>Adopted Village</b>							
4.	Chhatarpur		2					7
5.	Antari		1					16
6.	Simariya		2					15
7.	Katahari		2					10
8.	Purnia		4					15
9.	Jhagraha	0						12
	<b>Cluster Village</b>							
10	Kerhai		2					9
	<b>Control Village</b>							
	<b>Total</b>	2	8					10



- 8.63 Though in only two villages i.e. Antara [adopted village] and Jhagraha [cluster village] the middle schools are located within the village periphery, in rest of the 8 number of villages the middle schools are located within an easy distance of 2 to 4 kms which is almost in line with the laid down criterion for availability of middle school within a radius of 3 kms.
- 8.64 For most of the villages adult education centres are located far away from the village periphery. Since the percentage literacy of all the ten identified villages is fairly high, the necessity of having such institutions is not felt.

## SECONDARY LEVEL OF EDUCATION–HIGH SCHOOL & HIGHER SCHOOL [+2]

- 8.65 The policy regarding secondary level of education implies extension of school system in unserved areas consolidating the existing facilities and providing special arrangements for the talented students. In view of the above policy decisions, the following table shows the status of secondary level of education in our area of study;

Table No. 8.22  
Status of Secondary Level Education

Sr. No.	Name of the village	High School			Higher School (+2)		
		In the village 0 km	Within 5 km	More than 5 km	In the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Baaruka			7			7
2.	Antara			8			12
3.	Nipaniya		3				8
	<b>Adopted Village</b>						
4.	Chhatarpur		4				7
5.	Antari		5				10
6.	Simariya		2				15
7.	Katahari		2				15
8.	Purnia		4				12
9.	Jhagraha		5				12
	<b>Cluster Village</b>						
10	Kerhai			7			7
	<b>Control Village</b>						
	<b>Total</b>		7	3			10

- 8.66 A not very satisfactory situation is existing in ten number of identified villages regarding high and higher school as in non of the villages the high and higher schools are located within the village periphery. Though high schools are located within the easy distance from the identified villages but higher schools are located far away from the village periphery.

## COLLEGIATE AND TECHNICAL EDUCATION

8.67 The table below shows the details

Table No. 8.23  
Status of Collegiate and Technical Education

Sr. No.	Name of the village	College			Industrial Training Instt.		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Baaruka			10			10
2.	Antara			14			16
3.	Nipaniya			12			8
	<b>Adopted Village</b>						
4.	Chhatarpur			7		5	
5.	Antari			15			12
6.	Simariya			15			12
7.	Katahari			15			12
8.	Purnia			12			16
9.	Jhagraha			13			15
	<b>Cluster Village</b>						
10	Kerhai			13			10
	<b>Control Village</b>						
	<b>Total</b>			10		1	9

8.68 In non of the villages colleges or Industrial Training Institutes exist which is obvious as such institutions are usually located at tahsil or district headquarters.

## HEALTH

8.69 Improvement in health status of population has been one of the thrust areas in the social development programmes of the state of Madhya Pradesh. The ultimate objective of the health and family welfare activities of the State is to achieve the goal of "Health for All" as outlined in the National Health Policy which emphasized on implementation of primary health care approach.

8.70 In pursuit of this goal, a multitier health and family welfare service delivery system has been established in the State consisting of Sub Health Centres, Primary Health Centres and Community Health Centres. Besides, civil hospitals district hospitals and other special health care institutions have been provided for as a support to three tier system. A mention of the norms accepted for three tier system is given below;

- a. Sub Health Centre for every 5,000 population in non-tribal areas and 3,000 population in tribal areas.
- b. Primary Health Centre for every 30,000 population in non-tribal areas and 20,000 population in tribal areas.
- c. Community Health Centre for every 1,20,000 population in non-tribal areas and 80,000 population in tribal areas.

8.71 In view of the population criteria for rural health facilities the consideration for location of only Sub Health Centres, Rural Family Welfare Centres etc may be considered. The table below shows the details;

Table No. 8.24  
Rural Health Infrastructure

Sr. No.	Name of the village	Sub Health Centre			Rural Family Welfare Centre		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Baaruka			7		1	
2.	Antara		5			5	
3.	Nipaniya			8	0		
	<b>Adopted Village</b>						
4.	Chhatarpur			6		2	
5.	Antari		5			5	
6.	Simariya		5			1	
7.	Katahari		5			2	
8.	Purnia		4			5	
9.	Jhagraha		4			4	
	<b>Cluster Village</b>						
10	Kerhai			8		2	
	<b>Control Village</b>						
	<b>Total</b>	0	6	4	1	9	

Table No. 8.24 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Government Hospital			Government Dispensary		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	9	10	11	12	13	14
1.	Baaruka			7			7
2.	Antara			12			10
3.	Nipaniya			9			8
	<b>Adopted Village</b>						
4.	Chhatarpur			6			7
5.	Antari			12		5	
6.	Simariya			15			10
7.	Katahari			15			12
8.	Purnia			11		5	
9.	Jhagraha			12		5	
	<b>Cluster Village</b>						
10	Kerhai			13			13
	<b>Control Village</b>						
	<b>Total</b>			10		3	7

Table No. 8.24 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Private Clinic			Nursing Home		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	15	16	17	18	19	20
1.	Baaruka			6			8
2.	Antara			10			12
3.	Nipaniya			10			10
	<b>Adopted Village</b>						
4.	Chhatarpur			7			7
5.	Antari		5				12
6.	Simariya			10			15
7.	Katahari		2				15
8.	Purnia			10			11
9.	Jhagraha			10			12
	<b>Cluster Village</b>						
10	Kerhai			7			9
	<b>Control Village</b>						
	<b>Total</b>		2	8			10

8.72 Though non of the villages have **Sub Health Centres** within the village limits but are located within reachable distance, ranging between four to eight kms. Similar is the case with rural family welfare centres where with the exception of the village Nipaniya where this facility is available within the village, in rest of 9 villages the facility is located within manageable limits ranging between one to five kms.

8.73 **Government Hospitals** are located quite at far away distance from identified ten number of villages with obvious reasons that such health infrastructures are usually provided at tahsil or district levels serving as referal units for grass root level health services particularly that of Sub Health Centres and Primary Health Centres. **Government Dispensaries** are, ofcourse, available within easy manageable reach of the inhabitants of sample villages which serve as support institution to the three tier system of health infrastructure.

8.74 The institution of Private Clinic is gradually becoming popular in rural areas as is evident from the fact that in our sample area of study two number of villages have private clinics within five km range of the villages. **The basic cause of incoming of private practitioners usually not a qualified doctor, is the prepetual absence of medical personnel in rural health institutions that compel the rural population to take resort of the quakes, at least for common diseases.**

## FAMILY WELFARE

8.75 Limiting the size of the family is, perhaps, the most important constituent of family welfare as population growth, very rightly said, is the reutralising factor of development. The nation wide campaign of family welfare has undoubtedy made a dent both in urban and rural areas. The table below shows the status of acceptors of family welfare measures in sample villages covered under the study;

Table No. 8.25  
Status of Acceptors of Family Welfare Measures

Sr. No.	Name of the village	Total Workders	Acceptors of Nirodh (No. of Benefic-iaries)	Tubectomy (No. of Benefic-iaries)	Vasectomy (No. of Benefic-iaries)	Loop Insertion (No. of Benefic-iaries)	Oral Pills (No. of Benefic-iaries)	Traditional Methods (No. of Benefic-iaries)
1	2	3	4	5	6	7	8	9
1.	Baaruka	502	7 [1.39]	18 [3.59]	0	3 [0.60]	5 [1.00]	0
2.	Antara	274	9 [3.28]	17 [6.20]	3 [1.09]	5 [1.82]	10 [3.65]	0
3.	Nipaniya	374	15 [4.01]	25 [6.68]	6 [1.60]	7 [1.87]	17 [4.55]	5 [1.34]
	<b>Adopted Village</b>	1150	31 [2.70]	60 [5.22]	9 [0.78]	15 [1.30]	32 [2.78]	5 [0.45]
4.	Chhatarpur	62	0	3 [4.84]	0	0	2 [3.23]	0
5.	Antari	137	0	5 [3.65]	0	0	2 [1.46]	0
6.	Simariya	74	4 [5.41]	11 [14.86]	3 [4.05]	1 [1.35]	3 [4.05]	0
7.	Katahari	152	3 [1.97]	22 [14.47]	6 [3.95]	0	7 [4.61]	0
8.	Purnia	221	10 [4.52]	6 [2.72]	1 [0.45]	3 [1.36]	7 [3.17]	0
9.	Jhagraha	436	14 [3.21]	25 [5.73]	5 [1.15]	0	19 [4.36]	0
	<b>Cluster Village</b>	1082	31 [2.87]	72 [6.65]	15 [1.39]	4 [0.37]	40 [3.70]	0
10	Kerhai	130	2 [1.54]	6 [4.62]	0	0	2 [1.54]	0
	<b>Control Village</b>	130	2 [1.54]	6 [4.62]	0	0	2 [1.54]	0
	<b>Total</b>	2362	64 [2.71]	138 [5.84]	24 [1.02]	19 [0.80]	74 [3.13]	5 [0.21]

*Note : Figures in brackets show the percentage to the figures of column 3.*

- 8.76 In the above table the percentage figures have been arrived at on the basis of the figures of the workforce which is not very correct. The percentages should have been on the basis of the figures of eligible couples. Since village wise such figures are not available, therefore, as second option the work force figures that include persons within the age group of 15 to 59 years of age have been taken who may be taken as population with reproductive capacity, particularly of males.
- 8.77 Against the total figure of 2362 persons in the work force, the total number of persons adopting various methods of family welfare are 324 which is 13.72 percent to total work force. The performance though not very encouraging but would have presented a better picture had the comparison made with the figures of eligible couples.
- 8.78 The extent of adoption of family welfare measures, in general, is better in adopted villages as compared to both cluster and control villages. In line with prevailing trend, the response to acceptance of Nirodh, Tubectomy and oral pills is more than the other methods.

## DRINKING WATER

- 8.79 The strategies envisaged for the Tenth Plan mainly centred round the qualitative and quantitative improvement in rural water supply system by raising the level of services from 40 lped to 55 lped, reduce the maximum distance of water sources from the present 1.6 km to 0.5 km, providing alternate safe water source where existing sources have been contaminated and potable drinking water to new settlements etc.
- 8.80 Against the back drop of such strategies, the table below shows the existing level of drinking water facilities in the sample villages;

Table No. 8.26  
Status of Drinking Water Facilities

Sl. No.	Name of the Village	Sources of drinking water				
		In the village 0 km	Distance from the village			
			=1 KM	=2 KMS.	=3 KMS.	=4 KMS.
1	2	3	4	5	6	7
1	Baaruka	0				
2	Antara	0	-	-	-	-
3	Nipania	0	-	-	-	-
	<b>Adopted Village</b>		-	-	-	-
4	Chhatarpur	0				
5	Antari	0	-	-	-	-
6	Simariya	0	-	-	-	-
7	Katahari	0	-	-	-	-
8	Purnia	0	-	-	-	-
9	Jhagraha	0	-	-	-	-
	<b>Cluster Village</b>		-	-	-	-
10	Kerhai	0				
	<b>Control Village</b>		-	-	-	-
	<b>Total</b>	10	-	-	-	-

8.81 The above table shows that in all the ten number of sample villages one or other drinking water source, mostly hand-pumps, is available within the village which is the result of massive work of installation of hand pumps in rural areas undertaken by the State Government.

8.82 **In what follows an attempt has been made to summarise the details of the village particulars.**

- A very genuine question may arise as to the necessity of detailed analysis of the existence of facilities both infrastructural and otherwise in identified ten villages when the basic aim of the study is to highlight the impact of the performance of the K.V.Ks. in transferring agriculture related technologies to the farming communities. The answer is simple as the availability of basic facilities in and around the villages are prerequisites for absorption and implementation of any knowledge what-so-ever. Any attempt to transfer knowledge of efficiency to a back of the beyond village may prove futile because of the constraints of basic facilities that cause negative attitudinal status. But this does not mean that such villages should be left in lurch. Any way this being altogether a different topic is left for the time being.
- The total population of the ten identified village is 5586 which is 0.48 percent to total rural population of district Shahdol.
- In all the identified ten villages the percentage of S.T. population is more than S.C. population.
- The literacy rate that ranged between 19.6 percent for village Antara [cluster village] to 61.0 percent for village Nipaniya [adopted village] is close to the district percentage literacy of 58.71 and state percentage literacy of 63.74.
- The work participation rate that ranged between 37.5 percent in village Nipaniya [adopted village] to 58.8 percent in village Antari [cluster village] is in general more among males than females.
- In general proportion of female marginal workers is more than that of males which is obvious since our area of study is predominated by tribal population where work culture among females is equally high.

- Regarding non-workers that ranged between 43.2 percent in village Antari [cluster village] to 62.5 percent in village Nipaniya [adopted village] presents a dismal picture.
- In general the proportion of agriculture labour to total worker is more than cultivator which is not an encouraging situation. However, the main occupation of the ten identified number of villages covered under the study is agriculture as the combined percentage of cultivators and agriculture labour is 72.78 percent.
- The proportion of household workers to total workers is far from being satisfactory that ranged between 0.2 percent in village Baaruka to 1.1 percent in village Nipaniya.
- The proportion of other workers to total workers that ranged between 0.0 percent in village Kerhai [control village] to 54.0 percent in village Antara [adopted village] is quite substantial which, in general, shows the existence of other mix of employment opportunities in ten number of identified villages covered under the study.
- Regarding land use, the percentage of gross cropped area to total geographical area is 63.84 confirming the basic fact that main occupation of the sample villages is agriculture with only 3.90 percent of gross cropped area is under agriculture.
- All the ten number of villages covered under the study is electrified with irregular power supply situation.
- The total number of pump sets energized is 131 which is 4.57 percent of total number of 2865 pump sets energized in the district.
- The existence of only 2 household industrial units in the sample area of our study is not very peculiar as such units are generally not found in rural areas of the State.
- The existence of only one cooperative society in village Baaruka [adopted village] is far from being satisfactory.
- There is not much satisfactory status of availability of road infrastructure in the sample area of study as only 2 villages have fair weather roads and only in one village the Kharanza road exists.
- In only two villages the bus stand/bus stop is located within the village and in rest of the eight villages, these facilities are within the easy reach of the villagers.
- Except for the facility of fair price shops, in none of the identified villages the facilities like regulated market, weekly market, mandi etc exist.
- Except for flour mills, none of the other industrial units like oil mill, dal mill and saw mills are located within the villages identified for the study.
- Except for village Antari [cluster village] where the primary school is located at a distance of within 3 kms, in rest of nine number of villages the facility of primary school is available within the village periphery.
- Similarly for middle level of education in two villages viz. Antara [adopted village] and Jhagraha [cluster village] the middle schools are located within village periphery while in rest of 8 number of villages the middle schools are located within easy distance from the village.
- None of the villages are having high school, higher school, college and Industrial Training Institutions within the geographical limits of the ten identified villages covered under the study.
- The sub health centres and rural family welfare centres are located within the easy reach of the villagers.
- Regarding family welfare measures the response to acceptance of nirodh, tubectomy and oral pills is more than other methods.
- In all the ten number of sample villages one or other drinking water source, mostly hand-pumps is available.

**Results of Survey**

**- Household Particulars**

8.83 The present part of the chapter deals with the information relating to the households in the following dimensions;

- (i) Macro Dimensions – Wherein information from all the households residing in 10 number of sample villages has been collected.
- (ii) Micro Dimensions – Wherein 25 percent of the households have been identified for the detailed enquiry.

8.84 In what follows an attempt has been made to deal with both the macro and micro dimensions based on the information collected through House Listing Schedule and household Schedule respectively.

### MACRO DIMENSIONS – GENERAL PARTICULARS

8.85 The table below shows the details;

Table No. 8.27  
Household Details

S. No.	Name of the Village	No. of household as on the date of survey	Population Census-2001	Average size of he family (based on the figure of col.5)
1	2	3	4	5
1.	Baaruka	124	1276	10
2.	Antara	125	725	5
3.	Nipaniya	155	998	6
	<b>Adopted Village</b>	404	2999	7
4.	Chhatarpur	25	146	5
5.	Antari	33	241	7
6.	Simariya	39	140	3
7.	Katahari	70	374	5
8.	Purnia	67	442	6
9.	Jhagraha	134	987	7
	<b>Cluster Village</b>	368	2330	6
10	Kerhai	43	259	6
	<b>Control Village</b>	43	259	6
	<b>Total</b>	815	5588	6

8.86 The total number of households as on the date of survey is 815 for all the ten number of villages covered under the study. **The average size of the family comes to 6 persons which is more than the average size of the family of 5 persons.** In village Baaruka [adopted village] the family size is 10 person which is exceptionally high requiring the special attention of district administration.

### SOCIAL STATUS OF THE HOUSEHOLDS

8.87 The table below shows the details;



Table No. 8.28  
Social Status of the Households.

S. No.	Name of the Village	No. of House-hold	Caste (Social classification)				Interaction with KVK	
			S.T.	S.C.	O.B.C.	General	Yes	No
1	2	3	4	5	6	7	8	9
1.	Baaruka	124	71	0	39	14	31	93
2.	Antara	125	94	0	30	1	41	84
3.	Nipaniya	155	89	0	45	21	53	102
	<b>Adopted Village</b>	404	254	0	114	36	125	279
4.	Chhatarpur	25	19	1	0	5	10	15
5.	Antari	33	33	0	0	0	20	13
6.	Simariya	39	35	0	4	0	19	20
7.	Katahari	70	49	0	18	3	29	41
8.	Purnia	67	23	0	44	0	28	39
9.	Jhagraha	134	93	0	41	0	44	90
	<b>Cluster Village</b>	368	252	1	107	8	150	218
10	Kerhai	43	18	0	25	0	21	22
	<b>Control Village</b>	43	18	0	25	0	21	22
	<b>Total</b>	815	524	1	246	44	296	519

8.88 The above table shows the preponderance of households from S.T. and O.B.C. communities that constitute 94.48 percent to total number of 815 households whereas the combined percentage of S.C. and General Communities is 5.52 to total number of households.

#### HOUSEHOLDS CLASSIFIED ON THE BASIS OF RELIGION

8.89 The table below shows the details;

Table No. 8.29  
Distribution of Households on the Basis of Religion

S. No.	Name of the Village	No. of House-hold	Hindu	Muslim	Sikh	Christen	Nu-Buddh
1	2	3	4	5	6	7	8
1.	Baaruka	124	124	0	0	0	0
2.	Antara	125	125	0	0	0	0
3.	Nipaniya	155	155	0	0	0	0
	<b>Adopted Village</b>	404	404	0	0	0	0
4.	Chhatarpur	25	20	5	0	0	0
5.	Antari	33	33	0	0	0	0
6.	Simariya	39	39	0	0	0	0
7.	Katahari	70	70	0	0	0	0
8.	Purnia	67	67	0	0	0	0
9.	Jhagraha	134	134	0	0	0	0
	<b>Cluster Village</b>	368	363	5	0	0	0
10	Kerhai	43	43	0	0	0	0
	<b>Control Village</b>	43	43	0	0	0	0
	<b>Total</b>	815	810	5	0	0	0

8.90 Against the total number of 815 households, 810 households are the followers of Hindu religion while only 5 households are the follower of Muslim religion.

### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – MAIN OCCUPATION PRIMARY SECTOR – AGRICULTURE

8.91 The table below shows the details;

Table No. 8.30  
Household According to their Main Occupation – Agriculture

S. No.	Name of the Village	No. of house- hold	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Baaruka	124	0	42	70	0
2.	Antara	125	25	21	39	25
3.	Nipaniya	155	27	37	29	20
	<b>Adopted Village</b>	404	52	100	138	50
4.	Chhatarpur	25	0	8	4	5
5.	Antari	33	6	9	4	11
6.	Simariya	39	2	10	11	8
7.	Katahari	70	12	11	21	15
8.	Purnia	67	9	15	22	10
9.	Jhagraha	134	21	29	62	21
	<b>Cluster Village</b>	368	50	82	124	70
10	Kerhai	43	6	21	16	0
	<b>Control Village</b>	43	6	21	16	0
	<b>Total</b>	815	108	203	278	120

Note : Figures in brackets show percentage to total number of households.

8.92 Out of the total number of 815 households, 709 number of households are engaged directly in agriculture accounting for 86.99 percent to total number of households. Small and other farmers together constitute 59.02 percent to total households that shows viable nature of agriculture being pursued as main source of livelihood. The total number of households in the groups of marginal farmers and agriculture labour are 228 [27.97 percent] which are vulnerable households prone to migrate during lean season of agriculture.

8.93 The pursuance of occupations **like minor forest produce collection, live stock, fishing and hunting activities** are completely missing among sample households presenting a negative state of affairs as these occupations are good sources of augmenting household income through alternate sources, thereby reducing extent of under employment among farming communities.

### SECONDARY AND TERTIARY SECTORS

8.94 The secondary and tertiary sector occupations, being meaningful destinations that offer work opportunities to absorb the workforce engaged in marginal farming or pursuing the occupation of agriculture labour. The table below shows the details;

Table No. 8.31

## Households According to their Main Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	Mining and Quarrying	Secondary Sector		Tertiary Sector	
			Servicing And Repairs	Construction Work	Government Service	Service in Private Sector
1	2	3	4	5	6	7
1.	Baaruka	124	3	4	2	0
2.	Antara	125	0	0	0	1
3.	Nipaniya	155	5	9	0	0
	<b>Adopted Village</b>	404	8	13	2	1
4.	Chhatarpur	25	0	1	2	0
5.	Antari	33	0	0	0	0
6.	Simariya	39	0	0	0	0
7.	Katahari	70	0	0	0	0
8.	Purnia	67	0	0	3	0
9.	Jhagraha	134	3	2	2	0
	<b>Cluster Village</b>	368	3	3	7	0
10	Kerhai	43	0	0	0	0
	<b>Control Village</b>	43	0	0	0	0
	<b>Total</b>	815	11	16	9	1

8.95 The situation emerging from the above table is somewhat dismal. Only 27 number of households are engaged in secondary sector activities, mainly in construction work while only 10 number of workers are engaged in tertiary sector, mostly in government service.

**OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – SUBSIDIARY OCCUPATIONS****PRIMARY SECTOR – AGRICULTURE1**

8.96 The table below shows the details;

Table No. 8.32

## Households According to their Subsidiary Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Baaruka	124	0	9	2	2
2.	Antara	125	1	12	0	2
3.	Nipaniya	155	4	14	1	3
	<b>Adopted Village</b>	404	5	35		7
4.	Chhatarpur	25	4	17	0	3
5.	Antari	33	4	17	0	3
6.	Simariya	39	4	18	0	3
7.	Katahari	70	4	18	0	3
8.	Purnia	67	6	20	0	3
9.	Jhagraha	134	7	22	0	3
	<b>Cluster Village</b>	368	29	112	0	18
10	Kerhai	43	7	22	0	3
	<b>Control Village</b>	43	0	0	0	0
	<b>Total</b>	815	41 [5.03]	169 [20.74]	3 [0.37]	28 [3.43]

Note : Figures in brackets show percentage to total number of households.

8.97 The agriculture as subsidiary occupation is being pursued by 241 number of households which is 29.57 percent to total number of 815 households. **The combined** high percentage of marginal farmers, small farmers and agriculture labour which comes to 29.20 to total of

815 households, pursuing agriculture as subsidiary occupation is understandable as such cultivators usually have to resort to add jobs in nearby places to sustain their livelihoods but the agriculture as subsidiary occupation being pursued by 3 number of other farmers [0.37 percent] generally having sizable land holdings is somewhat paradoxical. Usually such farmers live in nearby bigger settlements and the cultivation is done by other persons on the basis of certain financial or barter agreements.

## PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

8.98 The table below shows the details;

Table No. 8.33  
Households According to their Subsidiary Occupation – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Producer Collection	Liver Tock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Baaruka	124	12	3	0	0
2.	Antara	125	16	1	0	0
3.	Nipaniya	155	21	0	0	0
	<b>Adopted Village</b>	404	49	4	0	0
4.	Chhatarpur	25	0	1	0	0
5.	Antari	33	9	1	0	0
6.	Simariya	39	5	0	0	0
7.	Katahari	70	13	1	0	0
8.	Purnia	67	5	0	0	0
9.	Jhagraha	134	28	0	0	0
	<b>Cluster Village</b>	368	60	3	0	0
10	Kerhai	43	3	5	0	0
	<b>Control Village</b>	43	3	5	0	0
	<b>Total</b>	815	112	12	0	0

8.99 The involvement of 112 households [13.74 percent] for collection of minor forest produce as subsidiary occupation seems obvious as the area is quite rich in forest resources since 32.48 percent area is under forest as compared to total geographical area of the district. The involvement of 12 number of households pursuing livestock activities as subsidiary occupation, though negligible but somewhat encouraging as this occupation is hardly been pursued in other K.V.K.

## SECONDARY AND TERTIARY SECTORS

8.100 The table below shows the details;

Table No. 8.34

## Households According to their Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	Mining and Quarrying	Secondary Sector		Tertiary Sector	
			Servicing And Repairs	Construction Work	Government Service	Service in Private Sector
1	2	3	4	5	6	7
1.	Baaruka	124	9	5	5	4
2.	Antara	125	7	7	1	1
3.	Nipaniya	155	7	2	0	0
	<b>Adopted Village</b>	404	23	14	6	5
4.	Chhatarpur	25	1	2	1	0
5.	Antari	33	1	2	0	0
6.	Simariya	39	1	1	1	0
7.	Katahari	70	4	0	0	0
8.	Purnia	67	0	2	1	0
9.	Jhagraha	134	2	2	1	0
	<b>Cluster Village</b>	368	9	9	4	0
10	Kerhai	43	0	1	2	0
	<b>Control Village</b>	43	0	1	2	0
	<b>Total</b>	815	32	24	12	5

8.101 In secondary sector occupations, 56 number of households [6.87 percent] are involved with major participation in servicing and repair activities, while in tertiary sectors the participation by 17 number of households [2.09 percent] mostly engaged in government services has been recorded.

8.102 **The overall conclusion that can be drawn from the information relating to occupational distribution of the households is that agriculture is main occupation of the households residing in ten number of identified villages covered under the study.**

**AVERAGE MONTHLY INCOME**

8.103 The table below shows the details;

Table No. 8.35  
Average Monthly Income

S. No.	Name of the Village	No. of House hold	Blow Rs.500	Rs.5001 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Baaruka	124	1	1	0	2	0	12	108
2.	Antara	125	1	3	2	7	3	16	93
3.	Nipaniya	155	1	3	1	5	1	19	125
	<b>Adopted Village</b>	404	3	7	3	14	4	47	326
4.	Chhatarpur	25	0	1	0	0	0	3	21
5.	Antari	33	0	0	0	1	1	4	27
6.	Simariya	39	0	0	0	0	0	2	37
7.	Katahari	70	0	0	0	1	2	14	53
8.	Purnia	67	0	0	0	0	1	5	61
9.	Jhagraha	134	0	0	3	5	4	23	99
	<b>Cluster Village</b>	368	0	1	3	7	8	51	298
10	Kerhai	43	0	0	1	1	0	4	37
	<b>Control Village</b>	43	0	0	1	1	0	4	37
	<b>Total</b>	815	3	8	7	22	12	102	661

8.104 The total number of households in the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is 763 which is 93.62 percent to total number of households that indicate the affluence level of the area particularly in the field of agriculture. In adopted villages this percentage is 92.33 while in cluster villages the percentage is 94.84 percent. Even in control village where there is no intervention of K.V.K., the total number of households in the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is 41 accounting for 95.35 percent to total number of 43 households.

## AVERAGE MONTHLY EXPENDITURE

8.105 The table below shows the details;

Table No. 8.36  
Average Monthly Expenditure

S. No.	Name of the Village	No. of Household	Blow Rs.50	Rs.50 1 to Rs.60	Rs.601 to Rs.700	Rs.70 1 to Rs.80	Rs.80 1 to Rs.90	Rs.901 to Rs.100	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Baaruka	124	1	1	0	2	0	4	116
2.	Antara	125	2	3	0	4	3	14	99
3.	Nipaniya	155	1	3	1	7	1	11	131
	<b>Adopted Village</b>	404	4	7	1	13	4	29	346
4.	Chhatarpur	25	1	0	0	0	0	1	23
5.	Antari	33	0	0	0	0	0	1	32
6.	Simariya	39	0	0	0	0	0	2	37
7.	Katahari	70	1	0	0	2	1	8	58
8.	Purnia	67	0	0	0	0	1	4	62
9.	Jhagraha	134	1	2	0	1	2	14	114
	<b>Cluster Village</b>	368	3	2	0	3	4	30	326
10	Kerhai	43	0	0	0	1	0	1	41
	<b>Control Village</b>	43	0	0	0	1	0	1	41
	<b>Total</b>	815	7	9	1	17	8	60	713

8.106 In line with income levels, the maximum number of 773 households are within the average monthly expenditure range of Rs. 901.00 to Rs. 1001.00 and above which is 94.85 percent to total number of households with the break-up of 92.82 for adopted villages, 96.74 percent for cluster villages and 97.67 percent for control village.

8.107 To **sum up** it may be mentioned that

- **The average size of the family residing in the sample area of study is 6 persons which is more than the standard size of the family of 5 persons. In village Baaruka [adopted village] the average size of the family is 10 persons which is exceptionally high requiring special attention of district administration.**
- **Preponderance of households from S.T. and O.B.C. communities is visible constituting 94.48 percent to total number of 815 households.**
- **The sample area is predominated by followers of Hindu religion that constitute 99.89 percent to total households.**

- Agriculture is the main stay of the households residing in identified ten numbers of villages as 86.99 percent households as compared to total households are engaged directly in agriculture occupation as prime source of livelihood. Small and other farmers [having sizeable land holding] together constitute 59.02 percent to total household that shows viability of agriculture being pursued as main occupation.
- The pursuance of occupations like minor forest produce collection, livestock, fishing and hunting activities are completely missing among sample households.
- In secondary and tertiary sector activities 37 number of households are engaged as main source of occupation which is 4.54 percent to total number of 815 number of households.
- Agriculture as subsidiary occupation is being pursued by 241 number of households which is 29.57 percent to total number of 815 households.
- The involvement of 112 households [13.74 percent] for collection of minor forest produce as subsidiary occupation is justified as the district is rich in forest resources.
- The 93.62 percent of households are within the average monthly income range of Rs. 901.00 to Rs. 1001.00 and above is the indication of affluence level of the area with matching levels of average monthly expenditure.

## RESULTS OF THE SURVEY – MICRO DIMENSION

8.108 In this section of write-up, 25 percent of the households have been identified for detailed inquiry. Though the 25 percent of the households of the total of 815 households comes to 203 but we have taken 199 households because of mainly due to their demographic elements. However, a few number plus or minus from the determined parameter is not much meaningful so long it does not vitiate the results of the survey.

## DEMOGRAPHIC PARTICULARS – MALE – FEMALE DISTRIBUTION

8.109 The table below shows the details;

Table No. 8.37  
Male – Female Distribution

S. No	Name of the Village	No. of Families Selected	No. of Family Members	Male Total	Age, Male						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Baaruka	31	197	99	28	20	15	12	12	5	7
2.	Antara	31	154	59	8	13	11	11	9	5	2
3.	Nipaniya	36	210	110	37	23	17	13	9	7	4
	<b>Adopted Village</b>	98	561	536	146	112	86	72	60	34	26
4.	Chhatarpur	6	40	19	5	4	3	4	1	1	1
5.	Antari	8	42	20	5	3	3	4	1	1	3
6.	Simariya	10	58	23	6	2	5	5	0	3	2
7.	Katahari	16	87	45	12	11	7	5	5	5	0
8.	Purnia	17	99	47	14	12	6	6	6	3	0
9.	Jhagraha	33	197	101	26	28	11	19	9	4	4
	<b>Cluster Village</b>	90	523	510	136	120	70	86	44	34	20
10	Kerhai	11	61	27	5	6	6	3	4	2	1
	<b>Control Village</b>	11	61	54	10	12	12	6	8	4	2
	<b>Total</b>	199	1145	550	146	122	84	82	56	36	24

Table No. 8.37 [Contd...]  
Male – Female Distribution

S. No.	Name of The Village	No. of Families Selected	No. of Family Members	Female Total	Age, Female						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	13	14	15	16	17	18	19	20
1.	Baaruka	31	197	98	24	26	20	11	11	3	3
2.	Antara	31	154	95	25	28	13	12	5	8	4
3.	Nipaniya	36	210	100	28	25	17	14	6	5	5
	<b>Adopted Village</b>	98	561	586	154	158	100	74	44	32	24
4.	Chhatarpur	6	40	21	5	7	2	4	1	2	0
5.	Antari	8	42	22	11	1	3	5	1	0	1
6.	Simariya	10	58	35	12	6	7	3	1	5	1
7.	Katahari	16	87	42	11	14	4	7	4	2	0
8.	Purnia	17	99	52	8	19	6	7	5	2	5
9.	Jhagraha	33	197	96	32	19	15	19	5	4	2
	<b>Cluster Village</b>	90	523	536	158	132	74	90	34	30	18
10	Kerhai	11	61	34	1	17	3	4	4	1	4
	<b>Control Village</b>	11	61	68	2	34	6	8	8	2	8
	<b>Total</b>	199	1145	595	157	162	90	86	43	32	25

8.110 Out of the total number of 1145 family members [which can also be considered as the total population of sample households] the male members are 550, constituting 48.03 percent to total family members, while for females this percentage is 51.97 a very rare trend of more females over males. **The number of males within the population group of 20 to 60 years considered to be the labour force of the area is 258 which is 22.53 percent to total male family members, is representative of the fact that fair number of males are available for work. In case of females, this percentage is 21.92, again indicating the availability of substantial number of females for producing marketable commodity as usually the females have to do the household work which is not marketable. Similar trend is more or less prevailing among the male-female population of adopted, cluster and control villages. The percentage of dependent population among males in the age group of 0-10 years and 60 years and above is 30.91 to total number of males which is a negative factor since this group of population do not contribute much towards family income. Similarly among females this percentage is 30.59 showing slightly lower extent of dependent population as compared to males.**

## EDUCATIONAL STATUS OF SAMPLE HOUSEHOLDS

8.111 Literacy and education are the prerequisites for adoption of any technology what-so-ever, requiring mental participation. Therefore, information regarding the educational status of the sample households has been collected to study the impact of literacy/education levels over the acceptability of agriculture related technology. The table below shows the details;



Table No. 8.38  
Educational Status

S. No.	Name of The Village	No. of Families Selected	No. of Family Members	Illiterate	Literate without going to school	Primary No.	Middle No.
1	2	3	4	5	6	7	8
1.	Baaruka	31	197	56	3	62	40
2.	Antara	31	154	67	2	40	43
3.	Nipaniya	36	210	57	3	88	56
	<b>Adopted Village</b>	98	561	180	8	190	139
4.	Chhatarpur	6	40	12	0	15	13
5.	Antari	8	42	24	0	13	3
6.	Simariya	10	58	31	0	21	6
7.	Katahari	16	87	39	0	29	12
8.	Purnia	17	99	33	6	16	30
9.	Jhagraha	33	197	74	3	61	53
	<b>Cluster Village</b>	90	523	213	9	155	117
10	Kerhai	11	61	27	2	13	16
	<b>Control Village</b>	11	61	27	2	13	16
	<b>Total</b>	199	1145	420	19	358	272

Table No. 8.38 [Contd...]  
Educational Status

S. No	Name of The Village	No. of Families Selected	No. of Family Members	High School No.	Higher School No.	Graduate No.	Post Graduate No	Others No.
1	2	3	4	9	10	11	12	13
1.	Baaruka	31	197	24	5	3	4	0
2.	Antara	31	154	1	1	0	0	0
3.	Nipaniya	36	210	6	0	0	0	0
	<b>Adopted Village</b>	98	561	31	6	3	4	0
4.	Chhatarpur	6	40	0	0	0	0	0
5.	Antari	8	42	2	0	0	0	0
6.	Simariya	10	58	0	0	0	0	0
7.	Katahari	16	87	5	1	0	1	0
8.	Purnia	17	99	12	2	0	0	0
9.	Jhagraha	33	197	6	0	0	0	0
	<b>Cluster Village</b>	90	523	25	3	0	1	0
10	Kerhai	11	61	3	0	0	0	0
	<b>Control Village</b>	11	61	3	0	0	0	0
	<b>Total</b>	199	1145	59	9	3	5	0

8.112 The above table shows a total of 420 persons as illiterate which is 31.68 percent to total family members. The extent of illiteracy is within reasonable limit which, ofcourse, is positive indication. The total number of children attending elementary level of education [primary + middle] is 630 accounting for 55.02 percent to total family member is again an encouraging factor indicating proper implementation of the programme of universalisation of Elementary Education in our area of study while number of students attending secondary level of education [high school + higher school (+)] is 68 which is 5.94 percent to total family members, a near satisfactory level. The extent of higher education is not impressive, reason being the lack of higher educational facilities in the area. The overall educational status that emerges proceeds to show the absorption capacity of the people of the sample area to adopt various technologies regarding agriculture communicated particularly by the K.V.K.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS–MAIN OCCUPATION

8.113 Out of the total of 1145 family members of sample households 236 persons are engaged in various main occupations that comes to 20.61 percent to total number of persons in identified sample households. In what follows an attempt has been made to analyse the information pertaining to main occupation.

### AGRICULTURE OCCUPATIONS

8.114 The table below shows the details;

Table No. 8.39  
Main Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1	2	3	4	5	6	7	8
1.	Baaruka	31	197	6	1	28	1
2.	Antara	31	154	10	1	18	0
3.	Nipaniya	36	210	21	0	17	0
	<b>Adopted Village</b>	98	561	37	2	63	1
4.	Chhatarpur	6	40	1	0	5	0
5.	Antari	8	42	2	0	6	0
6.	Simariya	10	58	3	0	7	0
7.	Katahari	16	87	7	0	13	0
8.	Purnia	17	99	2	0	17	0
9.	Jhagraha	33	197	12	0	21	0
	<b>Cluster Village</b>	90	523	27	0	69	0
10	Kerhai	11	61	7	1	4	1
	<b>Control Village</b>	11	61	7	1	4	1
	<b>Total</b>	199	1145	71	3	136	2

8.114 One of the satisfactory trends as depicted by the above table is that the bulk of the farming community is from the category of farmers consisting cultivators [136 number] having sizeable land holdings constituting 11.88 percent to total of 1145 family members and 57.63 percent to total of 236 persons pursuing various main occupations. In case of adopted and cluster villages the percentage of farmers to total family members is 11.23 and 13.19 respectively while as compared to total main workers these percentages are 26.69 and 26.24 respectively. Thus the application of agriculture related technology through K.V.K. in particular and other agencies in general is convenient in adopted and cluster villages.

8.115 Regarding activities allied to agriculture, 16 number of persons are engaged in minor-forest produce collection as main source of livelihood which is 1.34 percent to total of 1145 family members. Since the area is fairly rich in forest resources adherence to such type of occupation seems obvious.

## OCCUPATIONS RELATING TO SECONDARY AND TERTIARY SECTORS

8.116 The table below shows the details;

Table No. 8.40  
Main Occupation – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of families selected	No. of family members	Manufacturing of by Product	Servicing and repairs	Construction work	Govt. Service	Service in Pvt. Sector
1.	Baaruka	31	197	0	0	1	4	0
2.	Antara	31	154	0	0	1	0	0
3.	Nipaniya	36	210	0	0	0	0	0
	<b>Adopted Village</b>	98	561	0	0	2	4	0
4.	Chhatarpur	6	40	0	0	0	0	0
5.	Antari	8	42	1	0	0	0	0
6.	Simariya	10	58	0	0	0	0	0
7.	Katahari	16	87	0	0	0	1	0
8.	Purnia	17	99	0	0	0	0	0
9.	Jhagraha	33	197	0	0	0	0	0
	<b>Cluster Village</b>	90	523	1	0	0	1	0
10	Kerhai	11	61	0	0	0	0	0
	<b>Control Village</b>	11	61	0	0	0	0	0
	<b>Total</b>	199	1145	1	0	2	5	0

The employment of only 8 persons in secondary and tertiary sectors is hardly meaningful to avoid the stress on agriculture that ultimately results in population migration during lean season of agriculture.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS IN SUBSIDIARY OCCUPATIONS - AGRICULTURE

8.117 Out of total of 1145 persons from 199 households, 13 number of persons [1.14 percent] are engaged in subsidiary occupations mostly in activities allied to agriculture [10 persons].

### SUBSIDIARY OCCUPATION – AGRICULTURE

8.118 The table below shows the details;

Table No. 8.41  
Subsidiary Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1.	Baaruka	31	197	1	0	0	0
2.	Antara	31	154	0	0	1	0
3.	Nipaniya	36	210	1	0	0	0
	<b>Adopted Village</b>	98	561	2	0	1	0
4.	Chhatarpur	6	40	0	0	0	0
5.	Antari	8	42	0	0	0	0
6.	Simariya	10	58	0	0	0	0
7.	Katahari	16	87	0	0	0	0
8.	Purnia	17	99	0	0	0	0
9.	Jhagraha	33	197	0	0	0	0
	<b>Cluster Village</b>	90	523	0	0	0	0
10	Kerhai	11	61	0	0	0	0
	<b>Control Village</b>	11	61	0	0	0	0
	<b>Total</b>	199	1145	2	0	1	0

- 8.119 The above table shows the involvement of only 3 persons mostly as small farmer which is 0.26 percent to total number of 1145 family members. The status is hardly meaningful.
- 8.120 In occupation allied to agriculture 9 persons are engaged in minor forest produce collection [0.79 percent] and 1 person in live stock activities which is hardly a meaningful performance.
- 8.121 Involvement in subsidiary occupations, particularly activities allied to agriculture and secondary and tertiary sector occupations are highly meaningful for rural economy on the twin grounds of income augmentation and reduction of under employment in agriculture sector which, undoubtedly, is almost missing in our area of study. One of the basic drawbacks with rural economy is the absence of supportive functions, though the plethora of welfare activities initiated by the government are aimed at creating employment opportunities mainly through subsidiary occupations to ease pressure on land. Unfortunately such welfare schemes are yet to show their impact on far flung villages where even the basic awareness about the scheme do not exist, what to say of their implementation. Once the subsidiary employment avenues are created covering the back of the beyond villages, there will not be any looking back as the development will come as a logical outcome of forward linkages covering not only income generating sectors but social sectors like education, health etc.**

#### AVERAGE MONTHLY INCOME

- 8.122 The table below shows the details;

Table No. 8.42  
Average Monthly Income

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 & above
1	2	3	4	5	6	7	8	9	10	11
1.	Baaruka	31	197	35	0	0	1	0	5	156
2.	Antara	31	154	31	2	1	0	0	0	120
3.	Nipaniya	36	210	37	0	1	0	0	2	170
	<b>Adopted Village</b>	98	561	103	2	2	1	0	7	446
4.	Chhatarpur	6	40	6	0	0	0	0	0	34
5.	Antari	8	42	9	0	0	0	0	0	33
6.	Simariya	10	58	10	0	0	0	0	0	48
7.	Katahari	16	87	19	0	0	1	0	0	67
8.	Purnia	17	99	17	0	0	0	0	1	81
9.	Jhagraha	33	197	33	1	0	0	0	0	163
	<b>Cluster Village</b>	90	523	94	1	0	1	0	0	426
10	Kerhai	11	61	11	0	0	0	0	1	49
	<b>Control Village</b>	11	61	11	0	0	0	0	0	49
	<b>Total</b>	199	1145	208	3	2	2	0	9	921

- 8.123 The above table shows that 80.44 percent family members are within the average monthly income range of Rs. 1001.00 and above while 18.17 percent family members are within the average monthly income range of Rs. 500.00 and below. This shows that the farmers are pursuing agriculture on fair scale as agriculture is the main occupation of the sample area of our study.

## AVERAGE MONTHLY EXPENDITURE

8.124 The table shows the details;

Table No. 8.43  
Average Monthly Expenditure

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 and Above
1	2	3	4	5	6	7	8	9	10	11
1.	Baaruka	31	197	32	0	0	0	0	4	161
2.	Antara	31	154	29	0	0	0	0	0	125
3.	Nipaniya	36	210	33	0	0	0	0	2	175
	<b>Adopted Village</b>	98	561	94	0	0	0	0	6	461
4.	Chhatarpur	6	40	6	0	0	0	0	0	34
5.	Antari	8	42	8	0	0	0	0	0	34
6.	Simariya	10	58	9	0	0	0	0	0	49
7.	Katahari	16	87	16	0	0	0	0	3	68
8.	Purnia	17	99	17	0	0	0	0	0	82
9.	Jhagraha	33	197	29	0	0	0	0	0	168
	<b>Cluster Village</b>	90	523	85	0	0	0	0	3	435
10	Kerhai	11	61	10	0	0	0	0	1	50
	<b>Control Village</b>	11	61	10	0	0	0	0	1	50
	<b>Total</b>	199	1145	189	0	0	0	0	10	946

8.125 In line with income trend, 82.62 percent family members are within average monthly expenditure range of Rs. 1001.00 and above.

### 8.126 To sum up

- The percentage of males within the age group of 20 to 60 years, representing the labour force is 22.53 percent to total male family members while that for females the percentage is 21.92 indicating availability of substantial number of persons far performing various economic activities.
- The percentage of dependent population among males in the age group of 0-10 years and 60 years and above is 30.91 to total number of males is a negative factor since this group of population do not contribute much towards family income. Similarly among females this percentage is 30.59 showing higher extent of dependent population.
- The literacy percentage being 68.32 in the sample area is amazingly high that indicates the absorption capacity of the individuals to adopt latest technology regarding agriculture imparted by the K.V.K.
- The bulk of the farming community is from the category of farmers having sizeable land holdings constituting 57.63 percent to total of 236 persons pursuing various main occupations.
- Regarding activities allied to agriculture 16 number of persons are engaged in minor forest produce collection which is 6.78 percent to total of 236 persons engaged in main occupations.
- The employment of only 8 persons in secondary and tertiary sectors is hardly meaningful.
- Regarding subsidiary occupations, only 13 number of persons are engaged mostly in allied agricultural activities [10 person].

- Regarding average monthly income, 80.44 percent family members are within the average monthly income range of Rs. 1001.00 and above.
- Similarly regarding expenditure, 82.62 percent family members are within average monthly expenditure range of Rs. 1001.00 and above.

## RESULTS OF SURVEY

### SUBJECTS OF TRAINING RECEIVED– ADOPTED AND CLUSTER VILLAGES

8.127 At the outset it is, perhaps, necessary to clarify the point that there are 188 number of families who took part in vocational training, front line demonstration and on farm testing which are three basic mandates of K.V.K. The total responding families from vocational training, front line demonstration and on farm testing will not tally with the figure of 188 as from this basic figure the responding families participated in three fundamental activities. The entire analysis is based upon family approach as normally one member from each family from adopted and cluster villages, where there is direct intervention of K.V.K. takes part in various training programmes. It is evident that in what follows only adopted and cluster villages have been taken into account, i.e. 9 number of villages, excluding one control village where there is no intervention of K.V.K.

8.128 Out of the total of 199 households identified for detailed enquiry, 188 families have responded to various training and demonstration initiatives of the K.V.K. constituting 94.47 percent to total identified households, which, no doubt, is an encouraging picture that shows the awareness and intent of the farming community to adopt various technologies related to agriculture. In what follows an attempt has been made to present the item wise details of various initiatives adopted by the K.V.K. in the fields of vocational training, front line demonstration and on farm testing.

### VOCATIONAL TRAINING

8.129 The table below shows the details;

Table No. 8.44  
Subjects of Training Received – Vocational Training.

S. No.	Name of Village	No. of Respondent/ families	Subject on Which Training Received			
			Crop Prod Agronomy	Horticulture	Livestock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Baaruka	30	30	4	0	0
2	Antara	31	31	15	0	0
3	Nipaniya	36	36	8	0	0
<b>I</b>	<b>Adopted Village</b>	97	97	27	0	0
4	Chhatarpur	6	6	1	0	0
5	Antari	8	8	2	0	0
6	Simariya	10	10	2	0	0
7	Katahari	17	17	6	0	0
8	Purnia	17	17	8	0	0
9	Jhagraha	33	33	11	0	0
<b>II</b>	<b>Cluster Village</b>	91	91	30	0	0
	<b>Total All Villages</b>	188	188	57	0	0

Table No. 8.44 [Contd...]  
Subjects of Training Received – Vocational Training.

S. No.	Name of Village	Subject On Which Training Received				
		Home Science	Training of Rural Youth	Agro Forestry	Organic Farming	Water Shed Activities
1	2	8	9	10	11	12
1	Baaruka	6	0	0	5	0
2	Antara	6	0	0	8	0
3	Nipaniya	7	0	0	5	0
I	<b>Adopted Village</b>	19	0	0	18	0
4	Chhatarpur	0	0	0	3	0
5	Antari	2	0	0	0	0
6	Simariya	3	0	0	1	0
7	Katahari	3	0	0	4	0
8	Purnia	6	0	0	4	0
9	Jhagraha	8	0	0	4	0
II	<b>Cluster Village</b>	22	0	0	16	0
	<b>Total All Villages</b>	41	0	0	34	0

8.130 The above table shows the extent of major participation in the fields of agronomical crops [cent percent] and horticultural crops by 57 household representative that account for 30.32 percent to total of 188 responding families. The trend is more or less common for all the six K.V.Ks. covered under the study which emphatically indicates that rural households still cling to agriculture for earning livelihood and consider their farm as sole savior of their families backed by the years of confidence that they repose in it, despite its vagarent nature. Next to agriculture, comes the subjects like home science wherein 41 household [21.81 percent] and organic farming with 34 households [18.09 percent] have shown their interest. Home science is an area which is gradually picking – up in rural areas as being considered to be good source of subsidiary income mainly generated by women who do jobs like preparation of pickles, papad, bari etc. **The introduction of the concept of self help groups constituted for women have brought startling change in awareness among females who want to contribute for augmentation of family income. This, in stride, to some extent, has brought a degree of empowerment as well. Though the progress is slow, but, given the proper surrounding, the roots will certainly be deepened.** The interest for subject like organic farming is indicative of one basic fact that cultivators of our area of study are serious about the qualitative upgradation of their product that fetchs higher returns. Regarding subjects like livestock, dairying, poultry, fisheries, training of rural youth agro-forestry and watershed activities, the participation of persons are nil which, ofcourse, is a drawback as these subjects are very important for any rural economy.

#### FRONT LINE DEMONSTRATION [F.L.D.]

8.131 The main objective of the front line demonstration is to demonstrate newly released crop production and protection technologies and its management practices in the farmer's fields. However, in front line demonstrations, the interactions regarding home science activities, training of rural youth and all the other items as specified for vocational training are supposed to be done to educate the farmers for augmentation of income. The table below shows the details;

Table No. 8.45  
Subjects of Training Received – Front Line Demonstration

S. No	Name of The Village	No. of Respondent	Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry	Fisheries
1	Baaruka	7	7	0	0	0
1	Antara	6	6	0	0	0
2	Nipaniya	6	6	0	0	0
3	<b>Adopted Village</b>	19	19	0	0	0
I	Chhatarpur	2	2	0	0	0
4	Antari	2	2	0	0	0
5	Simariya	1	1	0	0	0
6	Katahari	2	2	0	0	0
7	Purnia	3	3	0	0	0
8	Jhagraha	3	3	0	0	0
9	<b>Cluster Village</b>	13	13	0	0	0
II	<b>Total All Villages</b>	32	32	0	0	0

8.132 At the outset it may, perhaps, be necessary to clarify the point that a crowded participation in F.L.Ds. is not possible for the reasons that these are organised on selected areas and are constrained by availability of budget.

8.133 The above table shows that out of 188 responding families 32 family representatives [17.02 percent] have responded to various programmes of front line demonstrations which is not much fair as in case of K.V.K. Bhopal the extent of respons is 39.31 percent. Here again, like vocational training, the crop production [agronomy] group seems very popular where cent percent households have shown interest in newly released crop production and protection technologies. In non of the other subjects F.L.Ds. have been organised which no doubt is a definite gap.

#### **ON FARM TESTING [O.F.T.]**

8.134 In this practice the farmers participate in identifying problems and its priorities and managing experiments and evaluating results. It is, therefore, an adaptive research with farmers perspective. The basic objective of O.F.T. is to identify existing inputs or practices that might help to solve major problems of many farmers in defined study area. The table below shows the details;



Table No. 8.46  
Subjects of Training Received – On Farm Testing

S. No.	Name of The Village	No. of Respondents	Subject On Which Training Received			
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry	Fisheries
1	2	3	4	5	6	7
1	Baaruka	2	2	0	0	0
2	Antara	4	4	0	0	0
3	Nipaniya	1	1	0	0	0
I	<b>Adopted Village</b>	7	7	0	0	0
4	Chhatarpur	0	0	0	0	0
5	Antari	0	0	0	0	0
6	Simariya	0	0	0	0	0
7	Katahari	0	0	0	0	0
8	Purnia	3	3	0	0	0
9	Jhagraha	1	1	0	0	0
II	<b>Cluster Village</b>	4	4	0	0	0
	<b>Total All Villages</b>	11	11	0	0	0

8.135 The above table shows that out of the total of 188 responding households only representatives of 11 households have shown interest towards organisation of O.F.T., which is 5.85 percent to total responding households and that too only for agronomy. In rest of the subjects no a O.F.T.s have been organised which, ofcourse is a definite gap.

**8.136 The conclusion that can be drawn from above narration is that the efforts of the K.V.K. through vocational training, front line demonstration and on farm testing were concentrated mainly on subjects like agronomy, horticulture and to some extent home science and organic farming wherein the resprentatives from responding households took interest and got vocational training and F.L.Ds. and O.F.Ts. organised. On rest of the subjects like live stock, fisheries, training of rural youth, agro-forestry and watershed activities the interest was nil. Therefore the impact of such activities can not be assessed.**

#### **IMPACT OF K.V.K.**

8.137 In the foregoing paragraphs an analysis of subject wise training received has been presented. In what follows an attempt has been made to present the impact of individual items of training in the broad categories of;

- Vocational Training
- Front Line Demonstration
- On Farm Testing

**both before and after training [BT, AT] situations. This is the most important part of the report that clearly indicates the impact of K.V.K's. interventions on agronomy, horticulture, livestock and dairying, fisheries, home science. Watershed activities, agro-forestry etc.**

#### **VOCATIONAL TRAINING – AGRONOMY - CEREALS**

8.138 The table below shows the impact of K.V.K's. intervention over cereal crops;

Table No. 8.47  
Agronomy – Cereals

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Paddy		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Baaruka	7	2571	2857	31	1190	2171
2	Antara	8	2475	2800	31	1350	2791
3	Nipaniya	9	2622	3233	36	1791	2987
I	<b>Adopted Village</b>	24					
4	Chhatarpur	3	3300	3500	6	1575	2259
5	Antari	2	2300	2950	8	1971	2140
6	Simariya	2	3300	3450	10	1971	2079
7	Katahari	4	2700	3125	17	1879	2051
8	Purnia	6	3683	4033	13	1991	2098
9	Jhagraha	8	2363	2975	33	1991	2151
II	<b>Cluster Village</b>	25			87		
	<b>Total All Villages</b>	49			185		

Table No. 8.47 [Contd...]  
Agronomy – Cereals

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Maize			Jowar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Baaruka	9	978	1244	0	0	0
2	Antara	0	0	0	0	0	0
3	Nipaniya	6	1633	1900	0	0	0
I	<b>Adopted Village</b>	15			0		
4	Chhatarpur	3	1733	1867	2	550	850
5	Antari	0	0	0	0	0	0
6	Simariya	2	1450	1750	0	0	0
7	Katahari	0	0	0	0	0	0
8	Purnia	4	1150	1175	0	0	0
9	Jhagraha	1	0	800	0	0	0
II	<b>Cluster Village</b>	10			2		
	<b>Total All Villages</b>	25			2		

8.139 Regarding **wheat crop** a total of 49 households have responded to the vocational training which is 26.06 percent to total of 188 responding household. For every village the yield per hectare in after training situation is better than before training condition that ranged between 2800 kg per hectare in village Antara [adopted village] to 4033 kg per-hectare in village Purnia [cluster village]. The yield per hectare of wheat in both before and after training situations is higher than district and state level productivity figures of 771 kg and 1867 kg respectively respectively **that indicates the positive impact of K.V.Ks. effort.**

- 8.140 As regards paddy crop only 185 number of households [98.40 percent] have responded to vocational training with yield per hectare in A.T. situations, more than of B.T. situations for all the villages covered under the study that ranged between 2051 kg per hectare for village Ktahari [cluster village] to 2987 kg per hectare for village Nipaniya [adopted village], much higher than the district and state level average per hectare yield of 997 kg and 1058 kg respectively. Again the impact of the K.V.Ks. effort is evident.
- 8.141 Regarding maize crop the total responding families are 29 [15.43 percent] which is exceptionally high. Here again the per-hectare yield in after training situations is higher than before training conditions ranging between 800 kg per hectare for village Jhagraha [cluster village] to 1900 kg per hectare for village Nipaniya [adopted village] indicating positive impact. As compared to district and state level productivity of 1299 kg and 2072 kg respectively, the per hectare yield in identified adopted and cluster villages is lower than both district and state average productivities.
- 8.142 Regarding Jowar crop, the total responding families are only 2 forming 1.06 percent to total of 188 responding households. For every reporting village the per hectare yield in after training situation is higher than that of before training conditions which is 550 kg per hectare for village Chhatarpur [cluster village] which is less than the district average productivity of 1134 Kg. and State average productivity of 1342 kg.

#### VOCATIONAL TRAINING – AGRONOMY – PULSES

8.143 The table below shows the details

Table No. 8.48  
Agronomy – Pulses

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Gram			Arhar			Lentil		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Baaruka	6	2010	2395	9	833	1000	1	500	700
2	Antara	6	1982	2410	5	760	940	0	0	0
3	Nipaniya	6	2159	2491	7	900	1043	0	0	0
I	<b>Adopted Village</b>	18			21			1		
4	Chhatarpur	2	2001	2251	3	600	900	0	0	0
5	Antari	2	1991	2175	2	650	903	0	0	0
6	Simariya	2	2001	2251	3	767	933	0	0	0
7	Katahari	3	1997	2319	3	733	904	0	0	0
8	Purnia	4	2001	2159	5	124 0	1480	0	0	0
9	Jhagraha	9	2110	2257	8	838	1100	0	0	0
II	<b>Cluster Village</b>	22			24			0		
	<b>Total All Villages</b>	40			45			1		

- 8.144 Gram being an important crop in pulses group the total number of families responding to vocational training are 40 [21.28 percent] with remarkable yield rates in after training conditions as compared to before training situations which ranged between 2159 kg per hectare for village Purnia [cluster village] to 2491 kg per hectare for village Nipaniya [adopted village] which are higher than both district average productivity of 452 kg and state average productivity of 932 kg.
- 8.145 Similarly for Arhar crop the responding households are 45 [23.94 percent] with yield rates per hectare higher in after training situations as compared to prevailing rates in before

training conditions which ranged between 900 kg per hectare for village Chhatarpur [cluster village] to 1480 kg per hectare for village purniya [cluster village]. When compared with district average productivity [567 kg] and state average productivity [825 kg] it has been found that the yield rates prevailing in after training situations for most of the villages are higher than both district and to state level average productivity.

- 8.146 Lentil being comparatively an unimportant crop of the district, the responding families requiring vocational training is only a 1 [0.53 percent] from village Baaruka wherein the yield rate in after training situation is more than before training conditions that accounted for 700 kg per hectare higher than the district average productivity of 439 kg and state average productivity of 506 kg.

#### VOCATIONAL TRAINING – AGRONOMY – OIL SEEDS

- 8.147 The table below shows the details;

Table No. 8.49  
Agronomy – Oil Seeds – Mustard

S. No	Name of The Village	Yield Per- Hectare - Kg.		
		Mustard		
		No. of Respondents	BT	AT
1	2	3	4	5
1	Baaruka	7	543	700
2	Antara	6	633	833
3	Nipaniya	6	700	883
I	<b>Adopted Village</b>	19		
4	Chhatarpur	2	600	800
5	Antari	2	650	700
6	Simariya	0	0	0
7	Katahari	3	493	603
8	Purnia	4	1025	1175
9	Jhagraha	5	580	860
II	<b>Cluster Village</b>	16		
	<b>Total All Villages</b>	35		

- 8.148 Mustard, though an important crop of the district the response is substantial as 35 number of households have responded to the vocational training organised by K.V.K. that comes to 18.62 percent to total of 188 responding households. The productivity in after training situation is better than before training conditions that ranged between 603 kg per hectare for village Katahari [cluster village] to 1775 kg per hectare for village Purnia [cluster village], **higher** than district average figures of 315 kg and lower than State level average productivity of 1009 for most of the villages.

- 8.149 **The participation of households for receiving training on crops like Soyabean, cotton, sugarcane and linseed is nil, therefore, the impact of vocational from training over such crops will not be visible.**

## VOCATIONAL TRAINING – HORTICULTURE

8.150 Horticulture crops are important from the twin view points of diversification of traditional crop cultivation and employment generation. Being perennial these crops help in checking soil erosion and being tough can be grown on waste land not suitable for traditional crops. The following table shows the details;

Table No. 8.50  
Horticulture Crops

S.No	Name of The Village	Yield Per- Hectare - Quintal					
		Potato			Onion		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Baaruka	0	0	0	1	180	290
2	Antara	14	197	203	0	0	0
3	Nipaniya	0	0	0	1	170	210
I	<b>Adopted Village</b>	14			2		
4	Chhatarpur	0	0	0	0	0	0
5	Antari	2	200	211	0	0	0
6	Simariya	0	0	0	0	0	0
7	Katahari	6	198	211	0	0	0
8	Purnia	2	200	245	3	187	245
9	Jhagraha	11	195	211	0	0	0
II	<b>Cluster Village</b>	21			3		
	<b>Total All Villages</b>	35			5		

Table No. 8.50 [Contd...]  
Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal					
		Tomato			Brinjal		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Baaruka	3	153	193	2	320	341
2	Antara	8	139	158	8	201	247
3	Nipaniya	6	165	202	4	211	271
I	<b>Adopted Village</b>	17			14		
4	Chhatarpur	1	190	200	1	200	220
5	Antari	0	0	0	2	290	330
6	Simariya	1	150	180	1	200	250
7	Katahari	2	150	170	3	214	279
8	Purnia	3	200	230	4	209	214
9	Jhagraha	8	148	170	8	279	291
II	<b>Cluster Village</b>	15			19		
	<b>Total All Villages</b>	32			33		

Table No. 8.50 [Contd...]  
Horticulture Crops

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Chilly			Bhindi			Cucurbits		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	15	16	17	18	19	20	21	22	23
1	Baaruka	2	140	165	0	0	0	0	0	0
2	Antara	3	188	189	1	80	90	0	0	0
3	Nipaniya	2	160	185	2	140	190	0	0	0
I	<b>Adopted Village</b>	7			3			0		
4	Chhatarpur	0	0	0	0	0	0	0	0	0
5	Antari	0	0	0	0	0	0	0	0	0
6	Simariya	1	150	157	1	80	90	0	0	0
7	Katahari	1	200	210	1	70	90	0	0	0
8	Purnia	2	175	190	2	200	250	2	165	190
9	Jhagraha	2	170	200	3	265	270	0	0	0
II	<b>Cluster Village</b>	6			7			2		
	<b>Total All Villages</b>	13			10			2		

- 8.151 The cultivation of horticulture crops is popular in district Shahdol due to climatic support and awareness among cultivators about the value of such crops for income augmentation. In ensuing paragraphs the cropwise analysis has been presented. However, it will not be out of place to mention that since district and state average productivity figures are not available, a comparison has not been made.
- 8.152 In case of **Potato crop** 35 number of households have responded to the vocational training programme which is **18.62** percent to total of 188 responding families. The per hectare yield has enhanced in every reporting village after receiving the training which ranged between 203 quintal per hectare for village Antara [adopted village] to 245 quintal per hectare for village Purni [cluster village]. The impact of the efforts of the K.V.K. is thus evident.
- 8.153 Regarding **Onion crop** only 5 number of family representatives [2.66 percent] have participated in vocational training resulting in enhanced per hectare yield in after training situation as compared to before training conditions that ranged between 210 quintal per hectare for village Nipania [adopted village] to 290 quintal per hectare for village Baaruka [adopted village].
- 8.154 **Tomato** is yet another crop gradually becoming popular as 32 number of households [17.02 percent] have shown interest to have vocational training resulting in enhancement of per hectare yield after participating in training as compared to before training conditions, ranging between 158 quintal per hectare for village Antara [adopted village] to 230 quintal per hectare for village Purnia [cluster village].
- 8.155 Regarding **Brinjal**, 33 family members [17.55 percent] have taken part in vocational training that resulted in enhanced per hectare yield in after training situation as compared to before training conditions, ranging between 214 quintal per hectare for village Purnia [cluster village] to 341 quintal per hectare for village Baaruka [adopted village].
- 8.156 **Chilly and Bhindi** are the crops wherein 13 and 10 family representatives respectively have responded to vocational training programme that constitute 6.91 percent and 5.32 percent respectively to total of 188 responding families. The per hectare yield in after training situation is much higher as compared to before training conditions that shows the impact of vocational training programme initiated by the K.V.K.

8.157 In the group of **Cucurbits**, the number of families responded are 2 which can hardly be termed as encouraging picture. However the yield per hectare in after training situation is better than before training position that vouches for positive impact of vocational training.

8.158 Since no vocational trainings have been organised for horticultural crops like spices, mango, banana, papaya and citrus, the impact of the K. V. K. will not be visible for such crops.

### VOCATIONAL TRAINING – HOME SCIENCE

8.159 **Home Science activities are getting popular in rural areas as it generates employment opportunities among women.** The initiatives taken by the government in forming self help groups for females have brought awareness to go for supporting activities that ultimately culminates into augmentation of income. The table below shows the details;

Table No. 8.51  
Home Science Activities

S. No.	Name of The Village	Toy Making No.			Pickle Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Baaruka	0	0	0	6	13	40
2	Antara	0	0	0	7	0	19
3	Nipaniya	1	0	2	6	17	33
I	<b>Adopted Village</b>	1	0	2	19	30	92
4	Chhatarpur	0	0	0	0	0	0
5	Antari	0	0	0	2	1	9
6	Simariya	0	0	0	2	2	12
7	Katahari	0	0	0	1	2	0
8	Purnia	0	0	0	5	8	29
9	Jhagraha	0	0	0	6	3	26
II	<b>Cluster Village</b>	0	0	0	16	16	76
	<b>Total All Villages</b>	1	0	2	35	46	168

Table No. 8.51 [Contd...]  
Home Science Activities

S. No.	Name of The Village	Bakery			Papad/Bari/Jam/Jelly Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Baaruka	0	0	0	1	0	2
2	Antara	0	0	0	5	1	14
3	Nipaniya	1	0	2	2	0	5
I	<b>Adopted Village</b>	1	0	2	8	1	21
4	Chhatarpur	0	0	0	0	0	0
5	Antari	0	0	0	2	0	6
6	Simariya	2	0	3	0	0	0
7	Katahari	0	0	0	1	0	4
8	Purnia	1	0	1	3	0	10
9	Jhagraha	0	0	0	6	1	17
II	<b>Cluster Village</b>	3	0	4	12	1	37
	<b>Total All Villages</b>	4	0	6	20	2	58

- 8.160 Ever since the plastic toys have come in the rural markets, the indigenous art of making clay toys is getting extinct as is evident from the fact that only 1 number of family representative has participated in vocational training organised for toy making from the village Nipania [adopted village] which is 0.53 percent to total of 188 responding families with 2 number of toys made in after training conditions which is hardly an impact worth mentioning.
- 8.161 Preparation of pickles is an item getting popular in rural areas as the skill is already there. Out of 188 responding families, 35 households [18.62 percent] have responded to the vocational training with preparation of 168 kg of pickles after getting the training as compared to 46 kgs in before training conditions. The impact of the intervention of K.V.K. is, thus, visible.
- 8.162 Regarding bakery items the participation of only 4 households is far from being tangible.
- 8.163 Regarding preparation of papad/bari/jam/jelly, 20 family representatives [10.64 percent] have participated in vocational training with preparation of 58 kgs of such items in after training conditions as compared to 2 kgs in before training situations. This is one of the home science activities which have immense scope in rural areas. **The government interventions through various target oriented programmes of Rural development department may yield startling results.**
- 8.164 Regarding training of rural youth only 3 households have taken part in training regarding motor binding with placement of 3 persons in after training situations. It may be mentioned that TRYSEM is one of the massive schemes of the government aimed at training of rural youth for self employment. With such scheme in vogue, it is always doubtful whether the rural youth will be participating in any such training organised by K.V.K., specially when there is no gurantee of placement.

#### **VOCATIONAL TRAINING – ORGANIC FARMING**

- 8.165 Organic farming though is a practice usually followed by big cultivators or government farms, but in our area of study 22 number of family representatives which is 11.70 percent to total of 188 responding households have participated in vocational training regarding bio-fertiliser with production 640 kgs. of bio-fertiliser in after training situations as compared to only 40 kgs. in before training conditions.
- 8.166 **No vocational trainings have been organised on subjects like livestock and dairying, poultry, fishery developments, agro forestry and watershed activities, all very important subjects for any rural economy. As such the impact of such subjects will not be visible.**
- 8.167 **In the following paragraphs an attempt has been made to sum-up the efforts of vocational training imparted by the K.V.K.**
- **Regarding the yield per hectare both for agronomical and horticultural crops the after training status as compared to before training conditions are better that clearly shows the positive impact of vocational training imparted by the K.V.K.**
  - **Regarding wheat crop the per hectare yield in after training situation is more than district and state average productivity of 771 kg. and 1867 kg. respectively.**
  - **Similar is the situation with paddy crop, where per hectare yield in after training situations is more than the district and state average productivity of 997 kg and 1058 kg respectively.**
  - **Reverse is the situation with maize crop where per – hectare yield in after training situation is less than district and state level productivity of 1299 kg and 2072 kg respectively.**



- Regarding jowar crop only 2 number of family representatives have responded to vocational training with per hectare yield less than the district level average productivity of 1134 kg and state level average productivity of 1342 kg.
- In pulses group vocational trainings have been organised for gram, arhar and lentil. The yield per hectare in after training situations for all these crops are higher than the prevailing average productivity both at district and state levels.
- In oil seed group, only for mustard crop vocational trainings has been organised with participation from 35 number of households [1862 percent to total of 188 responding households] with per hectare yield in excess of both district and state average productivities.
- Horticulture crops being non-conventional, are picking-up in Shahdol district as vocational training regarding crops like potato, onion, tomato, brinjal, chilly, bhindi and cucurbits have been organised with productivity much higher in after training situations as compared to before training conditions.
- Home science activities, particularly for functions like preparation of pickles and papad/badi etc. are getting popular in shahdol district as response to vocational training is substantial.
- Regarding training of rural youth only 3 households have taken part in vocational trainings for motor binding with placement of three persons in after training situations.
- Preparation of bio-fertilizer is becoming popular in the district as 22 number of family representatives which is 11.70 percent to total of 188 responding households have participated in the vocational training regarding bio-fertilizer with preparation of 640 kgs. of it in after training situations as compared to only 40 kgs. in before training conditions.
- No vocational training have been organised on subjects like livestock and dairying, poultry, fishery development, agro – forestry and watershed activities, all very important subjects for any rural economy. As such the impact of such subject will not be visible.

#### FRONT LINE DEMONSTRATION [F.L.D.]

8.168 Front line demonstrations [FLD] are organized on farmer's field with the result the response is bound to be low as compared to vocational training. The table below shows the impact of front line demonstrations on cereal crops.

Table No. 8.52  
Agronomy – Cereals

S. No	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Paddy		
		No. of Respon-dents	BT	AT	No. of Respon-dents	BT	AT
1	Baaruka	2	2900	3402	4	1420	1550
2	Antara	3	2167	2667	3	1521	2140
3	Nipaniya	2	2550	3400	4	1370	1570
I	<b>Adopted Village</b>	7			11		
4	Chhatarpur	0	0	0	1	3100	3900
5	Antari	1	2000	2700	0	0	0
6	Simariya	0	0	0	1	3100	3800
7	Katahari	0	0	0	2	2980	3541
8	Purnia	1	2451	3700	2	2781	2798
9	Jhagraha	2	3000	3200	2	2240	2895
II	<b>Cluster Village</b>	4			8		
	<b>Total All Villages</b>	11			19		

- 8.169 The front line demonstrations for the **wheat crop** have been organized on the fields of 11 cultivating households which is 5.85 percent to total of 188 responding families. The yield per-hectare in after training situation is higher than before training situation for every village that ranged between 2667 kg. per hectare for the village Antara [adopted village] to 3402 kg per hectare for village Baaruka [adopted village] which is far in excess of district and state average productivity of 771 kg and 1867 kg respectively.
- 8.170 Regarding **paddy crop** 19 number [10.11 percent] of demonstrations have been organised with yield per hectare higher in after training situations as compared to before training conditions that ranged between 1550 kg per hectare for villages Baaruka [adopted villages] to 3900 kg per hectare for village Chhatarpur (cluster village) which are higher than the district average productivity of 997 kg and state average productivity of 1058 kg.
- 8.171 No F.L.Ds. have been organised for Maize and Jowar. **Maize for which response regarding vocational training is substantiation, a few F.L.Ds. should have been organised for this crop specially when this is grown mostly by marginal and small farmers.**

### AGRONOMY - PULSES

- 8.172 The table below shows the details;

Table No. 8.53  
Agronomy – Pulses – Arhar

S. No	Name of The Village	Yield Per- Hectare - Kg.		
		Arhar		
		No. of Respon-dents	BT	AT
1	Baaruka	1	800	1000
2	Antara	0	0	0
3	Nipaniya	0	0	0
I	<b>Adopted Village</b>	1		
4	Chhatarpur	0	0	0
5	Antari	1	700	900
6	Simariya	0	0	0
7	Katahari	1	900	1000
8	Purnia	0	0	0
9	Jhagraha	0	0	0
II	<b>Cluster Village</b>	2		
	<b>Total All Villages</b>	3		

- 8.173 **For Arhar** only 3 F.L.Ds. have been organised at villages Baaruka, Antari and Katahari despite substantial response for vocational training, with productivity of 900 to 1000 kg per hectare in after training situation, higher than both in before training conditions and average district productivity of 567 kg and state average productivity of 825 kg.
- 8.174 **No F. L. Ds have been organised on subjects like horticulture, livestock and dairy, poultry, fishery development, home science, training of rural youth, agro-forestry, organic farming and watershed activities which no dobt is a gap in performance. Practically every subject has been left out. The performance is sketchy resulting in gap in introduction of new and prevailing technology in the field. The K.V.K. Shahdol have to sort out such snags in performance.**

### 8.175 To sum-up

- Regarding organisation of F.L.Ds. the performance is just sketchy without having tangible impact as most of the important subjects like horticulture livestock and dairying, poultry, fishery development, home science, training of rural youth, agro-forestry, organic farming and watershed activities have been left out.
- Since F.L.Ds. are measures of learning by doing, more extensive implementation of this mandate must be attempted, matching to vocational training. What is required is to plan the F.L.Ds. much in advance in consultation with district authorities of line departments like agriculture, horticulture and Chief Executive Officer of Zila Panchayat etc. so that an understanding of State Plan priorities are reflected over such advance planning. The vocational training may thus be organised to provide a basic class room knowledge regarding subjects on which F.L.Ds. are to be organised so that farmers are equipped with ready knowledge. After this step, the F.L.Ds. may be organised which will immensely help the cultivators to implement the technology.

### ON FARM TESTING [OFT] - CEREALS

8.176 In case of On Farm Testing, recommended technologies are tested on farmer's fields leading to the solution of various farming problems. The extent of response will obviously be low as the new technologies are not very frequent.

8.177 The table below shows the details;

Table No. 8.54  
Cereal Crops

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Paddy		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	Baaruka	1	0	3500	2	1510	2151
2	Antara	2	2550	2850	1	2700	3000
3	Nipaniya	0	0	0	2	2151	3125
I	<b>Adopted Village</b>	3			5		
4	Chhatarpur	0	0	0	0	0	0
5	Antari	0	0	0	0	0	0
6	Simariya	0	0	0	0	0	0
7	Katahari	0	0	0	0	0	0
8	Purnia	1	3800	4500	2	2981	3051
9	Jhagraha	0	0	0	0	0	0
II	<b>Cluster Village</b>	1			2		
	<b>Total All Villages</b>	4			7		

8.178 In case of **Wheat**, 4 number of on farm testing have been organised with yield per hectare higher in after training situation as compared to before training conditions that ranged between 2850 kg per hectare in village Antara [adopted village] to 4500 kg per-hectare in village Purnia [cluster village] which are much higher than the district and state average productivities of 771 kg and 1867 kg respectively.

8.179 Regarding Paddy, 7 O.F.Ts. have been organised with yield per hectare higher in after training situations that ranged between 2151 kg per hectare in village Baaruka [adopted village] to 3125 kg per hectare in village Nipaniya [adopted village] which are higher district average per hectare yield of 997 kg and state average figure of 1058 kg per hectare.

### ON FARM TESTING – PULSES CROPS

8.180 The table below shows the details;

Table No. 8.55  
Pulses - Arhar

S. No.	Name of The Village	Soyabeen		
		No. of Respondents	BT	AT
1	Baaruka	1	800	1000
2	Antara	0	0	0
3	Nipaniya	0	0	0
I	<b>Adopted Village</b>	1		
4	Chhatarpur	0	0	0
5	Antari	0	0	0
6	Simariya	0	0	0
7	Katahari	0	0	0
8	Purnia	0	0	0
9	Jhagraha	0	0	0
II	<b>Cluster Village</b>	0		
	<b>Total All Villages</b>	1		

8.181 Regarding Arhar only 1 number of O.F.T. has been organised in village Baaruka [adopted villages] with higher yield rate as compared to district and state level average productivities of 567 kg and 825 kg respectively in after training situations.

**8.182 No O.F.Ts. have been organised on subjects like horticulture, livestock and dairying, poultry, fishery development, home science, training of rural youth, agro-forestry organic farming and watershed activities, which are very relevant to rural economy. The impact of such activities through O.F.Ts. therefore, will not be visible.**

**8.183 In the following paragraphs summing-up efforts have been made regarding results of O.F.T.**

- In case of O.F.T., the yield per-hectare in after training situation is more than before training conditions as has happened for both vocational training and front line demonstrations which shows the positive impact of K.V.Ks. efforts.
- The overall performance regarding organizing O.F.Ts. is somewhat sketchy as is evident from that fact that on very important subjects like horticulture, livestock and dairying, poultry, fishery development, agro-forestry and watershed activities, no O.F.Ts. have been organised. Also there is complete mismatch between extent of organizing vocational training and O.F.T. As said earlier there should be definite chain of action between three basic mandates, i.e. vocational training, F.L.D. and O.F.T. with sequential results of impact of new or prevailing technologies.

## STATUS OF ACTIVITIES IN CONTROL VILLAGE – KERHAI

8.184 The study has identified one control village, i.e., Kerhai with 11 number of households and 61 sample family members, where there is no intervention of K.V.K. The information regarding common items of agronomical and horticulture crops have been collected to show the comparative status in areas of intervention and non-intervention. However, in case of control village before and after training situations have not been shown as there is no effort of K.V.K. in this village. **For comparison, average performance of vocational training in after training situation for adopted and cluster villages have been taken as the participation regarding all subjects is maximum in case of vocational training. The table below shows the comparative status of control village on one side and adopted and cluster villages on other side.**

Table No. 8.56

Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	3033.00	3213.67	(+) 180.67
2	Paddy	2291.00	2303.00	(+) 12.00
3	Maize	1417.00	1456.00	(+) 39.00
4	Jowar	533.00	850.00	(+) 317.00
<b>PULSES</b>				
5	Gram	900.00	2300.89	(+) 1400.89
6	Arhar	800.00	1022.56	(+) 222.56
7	Lentil	-	700.00	-
<b>OIL SEEDS</b>				
8	Soybean	-	-	-
9	Mustard	733.00	819.25	(+) 86.25
10	Linseed	-	-	-
<b>HORTICULTURE CROPS – QUINTAL</b>				
11	Potato	-	216.20	-
12	Onion	200.00	248.33	(+) 48.33
13	Tomato	170.00	187.88	(+) 17.88
14	Brinjal	180.00	271.44	(+) 91.44
15	Chilly	-	185.14	-
16	Bhindi	-	163.33	-
17	Cucerbits	-	190.00	-

8.185 The above table shows that except for the crops like wheat, jowar, arhar, mustard and brinjal where the per-hectare yield for adopted and cluster villages is substantially high as compared to that prevailing in control village, for rest of the crops the difference in per hectare yield is not much between adopted/cluster villages on one side and the control village on the other side. This shows that district as whole has conducive conditions for agricultural activities.

8.186 In the field of home science activities, particularly regarding preparation of pickles and papad/bari/jam/jelly etc. substantial work has been done in adopted and cluster villages through the efforts of K.V.K. whereas such activities are not very popular in control village.

**RESULTS OF SURVEY – INDIVIDUAL PARTICULARS  
ADOPTED AND CLUSTER VILLAGES**

8.187 In the following paragraphs an attempt has been made to highlight the various reactions of 25 percent of individuals. The total number of sample family members as reported is 1145 for adopted, cluster and control villages, the 25 percent of which comes to 286. But we have taken the figure of 285 due to certain demographic particulars. However, a deviation of few figures plus or minus is immaterial so long if does not vitiate the survey results.

Table No. 8.57  
Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	561	138
2	Cluster Villages	523	132
3	Control Village	61	15
	<b>Total</b>	<b>1145</b>	<b>285</b>

8.188 In the following paragraphs an attempt has been made to highlight the individual reactions in **adopted and cluster villages**, i.e. for 270 **individuals**.

8.189 The criteria for selection of individuals are as follows;

- The individual should be the adult member of the family.
- He should be associated with any programme of K.V.K. For individuals of control village, this criterion is not applicable.
- He/She should be literate, may be without having any formal education.

**SOCIAL CLASSIFICATION OF INDIVIDUALS**

8.190 The table below shows the details;

Table No. 8.58  
Social Classification

S. No.	Name of the Village	No. of Individual	Social classification			
			S.T.	S.C.	O.B.C.	GENERAL
1	2	3	4	5	6	7
1.	Baaruka	48	12	0	28	8
2.	Antara	38	12	0	26	0
3.	Nipaniya	52	32	0	12	8
	<b>Adopted Village</b>	138	56	0	66	16
4.	Chhatarpur	10	10	0	0	0
5.	Antari	11	11	0	0	0
6.	Simariya	15	8	0	7	0
7.	Katahari	22	10	0	8	4
8.	Purnia	25	5	0	20	0
9.	Jhagraha	49	19	0	30	0
	<b>Cluster Village</b>	132	63	0	65	4
	<b>Total</b>	270	119	0	131	20

8.191 The above table shows that the majority of 119 individuals are from the group of S.T. which is 44.07 percent to total of 270 sample individuals from adopted and cluster villages. The combined percentage of O.B.C. and General individuals is 55.93 to total sample individuals while no. of individuals from S.C. community is nil. Thus the entire area of adopted and cluster villages is predominated by S.T. population that throws a challenge before K.V.K. scientists to achieve tangible results.

### INDIVIDUALS CLASSIFIED ON THE BASIS OF RELIGION

8.192 The following table gives the details;

Table No. 8.59  
Classification on the Basis of Religion

S. No.	Name of the Village	No. of Individual	Religion					
			Hindu	Muslim	Sikh	Christian	Nauabudh	Others
1	2	3	4	5	6	7	8	9
1.	Baaruka	48	48	0	0	0	0	0
2.	Antara	38	38	0	0	0	0	0
3.	Nipaniya	52	52	0	0	0	0	0
	<b>Adopted Village</b>	138	138	0	0	0	0	0
4.	Chhatarpur	10	10	0	0	0	0	0
5.	Antari	11	11	0	0	0	0	0
6.	Simariya	15	15	0	0	0	0	0
7.	Katahari	22	22	0	0	0	0	0
8.	Purnia	25	25	0	0	0	0	0
9.	Jhagraha	49	49	0	0	0	0	0
	<b>Cluster Village</b>	132	132	0	0	0	0	0
	<b>Total</b>	270	270	0	0	0	0	0

8.193 The above table shows that cent-percent individuals are the followers of Hindu religion.

### AWARENESS ABOUT THE K.V.K.

8.194 The table below shows the details;

Table No. 8.60  
Awareness About the K.V.K.

S. No	Name of the Village	No. of Individual	Awareness about existence of K.V.K.		If 'yes' knowledge about its location		Awareness about services rendered by the K.V.K.	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Baaruka	48	48	0	48	0	48	0
2.	Antara	38	38	0	38	0	38	0
3.	Nipaniya	52	52	0	52	0	52	0
	<b>Adopted Village</b>	138	138	0	138	0	138	0
4.	Chhatarpur	10	10	0	10	0	10	0
5.	Antari	11	11	0	11	0	11	0
6.	Simariya	15	15	0	15	0	15	0
7.	Katahari	22	22	0	22	0	22	0
8.	Purnia	25	25	0	25	0	25	0
9.	Jhagraha	49	49	0	49	0	49	0
	<b>Cluster Village</b>	132	132	0	132	0	132	0
	<b>Total</b>	270	270	0	270	0	270	0

8.195 The cent percent awareness about the location and, more important, the services rendered by it is an encouraging indication which shows the positive efforts of the K.V.K. to popularize the its functions.

### KNOWLEDGE ABOUT SPECIFIC SERVICES RENDERED BY K.V.K.

8.196 The table below shows the details;

Table No. 8.61  
Specific Services Rendered by the K.V.K.

S. No	Name of the Village	No. of Individual	Knowledge about vocational		Knowledge about front line demonstration training		Knowledge about on farm testing	
			Yes	No	Yes	No	Yes	No
1	2	3	4	5	6	7	8	9
1.	Baaruka	48	48	0	48	0	48	0
2.	Antara	38	38	0	38	0	38	0
3.	Nipaniya	52	52	0	52	0	52	0
	<b>Adopted Village</b>	138	138	0	138	0	138	0
4.	Chhatarpur	10	8	2	0	10	0	10
5.	Antari	11	11	0	11	0	11	0
6.	Simariya	15	15	0	15	0	15	0
7.	Katahari	22	22	0	22	0	22	0
8.	Purnia	25	25	0	25	0	23	2
9.	Jhagraha	49	49	0	18	31	1	48
	<b>Cluster Village</b>	132	130	2	91	41	72	60
	<b>Total</b>	270	268	2	229	41	210	60

8.197 The above table shows the substantial knowledge of individuals about the specific services rendered by the K.V.K.

### FIELD VISITS OF K.V.K. SCIENTISTS

8.198 Regular field visits by the K.V.K. scientists are necessary prerequisites for the implementation of agriculture related technology. The table below shows the extent of such visits;

Table No. 8.62  
Field Visits of K.V.K. Scientists

S. No	Name of the Village	No. of Individual	If no the duration gap			
			One month (1)	Two month (2)	More than two month (3)	Never (4)
1	2	3	4	5	6	7
1.	Baaruka	48	0	0	0	48
2.	Antara	38	0	0	0	38
3.	Nipaniya	52	5	0	0	47
	<b>Adopted Village</b>	138	5	0	0	133
4.	Chhatarpur	10	2	0	0	8
5.	Antari	11	4	0	0	7
6.	Simariya	15	2	0	0	13
7.	Katahari	22	8	0	0	14
8.	Purnia	25	1	0	2	22
9.	Jhagraha	49	0	4	12	33
	<b>Cluster Village</b>	132	17	4	14	97
	<b>Total</b>	270	22	4	14	230



8.199 Cent percent individuals have reported about irregular visit of K.V.K. scientists. Even 230 individuals have reported that in K.V.K. scientists never visit the field. The information seems exaggerated which is entirely at variation with information about awareness about the services rendered by K.V.K. which is substantial. Had there been no visits how can there be awareness about specific services. Even if half the information is taken to be correct it is a red alert to the K.V.K. scientists who would regularly visit the fields.

### THE STATUS OF REGULAR CONTACT WITH K.V.K.

8.200 The regular contact of the farmers with K.V.K. is one of the determining factors for implementation of agriculture related technologies in the field. The table below shows the details;

Table No. 8.63  
Status of regular contact with K.V.K.

S. No	Name of the Village	No. of Individual	Regular touch with K.V.K.		If yes reason			if 'no' the reason	
			Yes (1)	No (2)	For seed (1)	Plant protection (2)	New technology (3)	Distance (1)	Do not feel the necessity (2)
1	2	3	4	5	6	7	8	9	0
1.	Baaruka	48	48	0	1	0	47	0	0
2.	Antara	38	38	0	0	0	38	0	0
3.	Nipaniya	52	47	5	0	5	47	5	0
	<b>Adopted Village</b>	138	133	5	1	5	132	5	0
4.	Chhatarpur	10	8	2	0	2	8	2	0
5.	Antari	11	7	4	2	2	7	2	0
6.	Simariya	15	13	2	0	2	13	2	0
7.	Katahari	22	14	8	0	8	14	8	0
8.	Purnia	25	22	3	2	1	22	3	0
9.	Jhagraha	49	45	4	4	6	11	2	4
	<b>Cluster Village</b>	132	109	23	8	21	75	19	4
	Total	270	242	28	9	26	207	24	4

8.201 The above table shows that out of 270 individuals, 242 individuals [89.63 percent] have reported about regular contact with K.V.K. while 28 persons [10.37 percent] have reported about irregular contact. The positive response by 207 individuals [76.67 percent] is mainly due the desire for new technology which obviously is an achievement of the K.V.K. while 35 sample individuals [12.96 percent] have contacted the K.V.K. for seed and plant protection measures. The main cause of negative response by 24 individuals [8.89 percent] is the distance factor which the K.V.K. scientists can not help. Four number of individuals [1.48 percent] have not contacted the K.V.K. as they do not feel the necessity of it. Though the number of such individuals is limited but the attitude is not healthy. The K.V.K. scientists may initiate sincere efforts to stop brewing such attitudinal trend, which, in long run, may be disastrous.

## STATUS OF IMPLEMENTATION OF THE SERVICES OF THE K.V.K.

8.202 The table below shows the details;

Table No. 8.64  
Implementation of the Services of K.V.K.

S No	Name of the Village	No. of Individual	Implementation of the services of K.V.K.		If yes in what fields				
			Yes (1)	No (2)	Agro-nomy	Horti-culture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Baaruka	48	47	1	48	0	0	0	0
2.	Antara	38	38	0	38	0	0	0	0
3.	Nipaniya	52	52	0	52	0	0	0	0
	<b>Adopted Village</b>	138	137	1	138	0	0	0	0
4.	Chhatarpur	10	10	0	8	0	0	0	0
5.	Antari	11	9	2	11	0	0	0	0
6.	Simariya	15	15	0	15	0	0	0	0
7.	Katahari	22	22	0	22	0	0	0	0
8.	Purnia	25	25	0	23	0	0	0	0
9.	Jhagraha	49	45	4	49	0	0	0	0
	<b>Cluster Village</b>	132	126	6	128	0	0	0	0
	Total	270	263	7	266	0	0	0	0

Table No. 8.64 [Contd...]  
Implementation of the Services of K.V.K.

S. No	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Trainin g of rural youth	Not satisfied with new technolog y	Problem of resource s	Satisfied with present status
1	2	11	12	13	14	15	16	17	18
1.	Baaruka	9	0	4	0	0	0	0	0
2.	Antara	10	0	4	0	0	0	0	0
3.	Nipaniya	9	0	5	0	0	0	0	0
	<b>Adopted Village</b>	28	0	13	0	0	0	0	0
4.	Chhatarpur	0	0	5	0	0	0	4	0
5.	Antari	3	0	0	0	0	0	0	0
6.	Simariya	6	0	0	0	0	0	0	0
7.	Katahari	6	0	1	0	0	0	3	0
8.	Purnia	7	0	0	0	0	0	0	0
9.	Jhagraha	15	0	0	0	0	0	0	0
	<b>Cluster Village</b>	37	0	6	0	0	0	7	0
	Total	65	0	19	0	0	0	7	0

8.203 The above table shows that out of 270 individuals, 263 individuals [97.41 percent] have implemented the services of K.V.K. which is a fair account of achievement. It is worth mentioning that the figure of itemwise coverage will not tally with the figure of 263 as the same person from agronomy might have implemented the improved techniques in the fields of horticulture, animal husbandry etc.

8.204 The subject wise coverage figures show that the highest number of 266 individuals [98.52 percent] have implemented the services of K.V.K. in the fields of agronomy followed by 65 persons [24.07 percent] for home science and only 19 individuals have shown interest in organic farming.

8.205 Problem of resource is the only factor due to which 7 number of sample individuals [2.59 percent] have not implemented the services of the K.V.K.

### SATISFACTION LEVEL OF THE INDIVIDUALS ABOUT THE SERVICES OF K.V.K.

8.206 The level of satisfaction derived from the services of K.V.K. is important to sustain the efforts of K.V.K. over a period of time. The table below shows the details;

Table No. 8.65  
Satisfaction Level of the Individuals

S. No	Name of the Village	No. of Individual	Satisfied with the impact		If yes in what fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Baaruka	48	48	0	46	0	0	0	0
2.	Antara	38	38	0	38	0	0	0	0
3.	Nipaniya	52	52	0	52	0	0	0	0
	<b>Adopted Village</b>	138	138	0	136	0	0	0	0
4.	Chhatarpur	10	10	0	10	0	0	0	0
5.	Antari	11	11	0	11	0	0	0	0
6.	Simariya	15	15	0	15	0	0	0	0
7.	Katahari	22	22	0	22	0	0	0	0
8.	Purnia	25	25	0	25	0	0	0	0
9.	Jhagraha	49	49	0	49	0	0	0	0
	<b>Cluster Village</b>	132	132	0	132	0	0	0	0
	Total	270	270	0	268	0	0	0	0

Table No. 8.65 [Contd...]  
Satisfaction Level of the Individuals

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Technique is difficult to follow	Inputs are not easily available	Non-availability of advice in the time
1	2	11	12	13	14	15	16	17	18
1.	Baaruka	9	0	4	0	0	0	0	0
2.	Antara	9	0	5	0	0	0	0	0
3.	Nipaniya	9	0	5	0	0	0	0	0
	<b>Adopted Village</b>	27	0	14	0	0	0	0	0
4.	Chhatarpur	0	0	5	0	0	0	0	0
5.	Antari	3	0	0	0	0	0	0	0
6.	Simariya	6	0	0	0	0	0	0	0
7.	Katahari	6	0	2	0	0	0	0	0
8.	Purnia	7	0	0	0	0	0	0	0
9.	Jhagraha	15	0	0	0	0	0	0	0
	<b>Cluster Village</b>	37	0	7	0	0	0	0	0
	<b>Total</b>	64	0	21	0	0	0	0	0

8.207 The above table shows the cent percent satisfaction level of individuals regarding impact of K.V.K. services which in itself is an achievement.

8.208 Regarding subjectwise level of satisfaction, agronomy is the prime subject where 268 individuals [99.26 percent] have shown their satisfaction followed by home science activities [64 individuals] and organic farming [21 individuals].

### IMPACT ON INCOME ENHANCEMENT

8.209 The table below shows the details;

Table No. 8.66  
Impact on Income Enhancement

S. No.	Name of the Village	No. of Individual	Income enhancement		If yes the fields				
			Yes (1)	No (2)	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Baaruka	48	48	0	43	0	0	0	0
2.	Antara	38	38	0	38	0	0	0	0
3.	Nipaniya	52	52	0	51	0	0	0	0
	<b>Adopted Village</b>	138	138	0	132	0	0	0	0
4.	Chhatarpur	10	10	0	10	0	0	0	0
5.	Antari	11	11	0	11	0	0	0	0
6.	Simariya	15	15	0	15	0	0	0	0
7.	Katahari	22	22	0	22	0	0	0	0
8.	Purnia	25	25	0	25	0	0	0	0
9.	Jhagraha	49	47	2	46	0	0	0	0
	<b>Cluster Village</b>	132	130	2	129	0	0	0	0
	<b>Total</b>	270	268	2	261	0	0	0	0

Table No. 8.66 [Contd...]  
Impact on Income Enhancement

S. No.	Name of the Village						If no the reasons		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Could not follow the instruction	Problem of resource	Non-availability technical advice in time
1	2	11	12	13	14	15	16	17	18
1.	Baaruka	9	0	4	0	0	0	0	0
2.	Antara	9	0	5	0	0	0	0	0
3.	Nipaniya	10	0	3	0	0	0	0	0
	<b>Adopted Village</b>	28	0	12	0	0	0	0	0
4.	Chhatarpur	0	0	5	0	0	0	0	0
5.	Antari	3	0	0	0	0	0	0	0
6.	Simariya	6	0	0	0	0	0	0	0
7.	Katahari	6	0	2	0	0	0	2	0
8.	Purnia	7	0	0	0	0	0	0	0
9.	Jhagraha	15	0	0	0	0	0	0	0
	<b>Cluster Village</b>	37	0	7	0	0	0	2	0
	Total	65	0	19	0	0	0	2	0

8.210 Out of 270 number of individuals 268 individuals [99.26 percent] have expressed the positive impact of K.V.Ks. efforts over income enhancement which, in itself is an startling achievement. It may be mentioned here that subject wise reaction will not tally with the figure of 268 as the same person may react over multiple of subjects. Maximum number of 261 individuals which is 96.67 percent to total individuals have positive response of income enhancement through agronomy followed by response of 65 persons for home science and 19 persons for organic farming.

#### EXTENT OF INCOME ENHANCEMENT

8.211 Assessment of income level of individuals is one of the most difficult aspects of primary data collection as the persons are usually shy of giving the correct information. However, through indirect approach, information regarding income has been collected which is given in the following table;

Table No. 8.67  
Extent of Income Enhancement

S. No	Name of the Village	No. of Individual	Percentage increase in Income								
			1 to 10%	11 to 20%	21 to 30%	31 to 50%	51 to 60%	61 to 70%	71 to 80%	81 to 90%	91 to 100%
1	2	3	4	5	6	7	8	9	10	11	12
1.	Baaruka	48	48	0	0	0	0	0	0	0	0
2.	Antara	38	32	6	0	0	0	0	0	0	0
3.	Nipaniya	52	52	0	0	0	0	0	0	0	0
	<b>Adopted Village</b>	138	132	6	0	0	0	0	0	0	0
4.	Chhatarpur	10	10	0	0	0	0	0	0	0	0
5.	Antari	11	11	0	0	0	0	0	0	0	0
6.	Simariya	15	13	2	0	0	0	0	0	0	0
7.	Katahari	22	20	2	0	0	0	0	0	0	0
8.	Purnia	25	12	13	0	0	0	0	0	0	0
9.	Jhagraha	49	49	0	0	0	0	0	0	0	0
	<b>Cluster Village</b>	132	115	17	0	0	0	0	0	0	0
	Total	270	247	23	0	0	0	0	0	0	0

8.212 The above table shows that out of 270 individuals, 247 individuals [91.48 percent] have reported about 1 to 10 percent income enhancement due to the efforts of the K.V.K. while 23 persons [8.52 percent] reported about 11 to 20 percent enhancement in income which is a creditable achievement.

### OPINION ABOUT CONTINUANCE OF THE SERVICES OF K.V.K.

8.213 The table below shows the details;

Table No. 8.68  
Opinion about Continuance of K.V.K. Services

S. No.	Name of the Village	No. of Individual	Continuation of the services of K.V.K.	
			Yes (1)	No (2)
1	2	3	4	5
1.	Baaruka	48	48	0
2.	Antara	38	38	0
3.	Nipaniya	52	51	1
	<b>Adopted Village</b>	138	137	1
4.	Chhatarpur	10	10	0
5.	Antari	11	11	0
6.	Simariya	15	15	0
7.	Katahari	22	22	0
8.	Purnia	25	25	0
9.	Jhagraha	49	49	0
	<b>Cluster Village</b>	132	132	0
	Total	270	269	1

8.214 The above table shows that out of 270 individuals, 269 individuals [99.63 percent] have opined for continuance of the services of K.V.K. particularly in the fields of agromony, home science and organic farming while only one number of individual [0.27 percent] have given negative opinion which seems natural in view of large number of respondents. **Viewing things from the positive angle, the performance of the K.V.K. is laudable, as the efforts have won the confidence of the farming community of our area of study.**

### SUGGESTIONS FOR ADDITIONAL SERVICES TO BE RENDERED BY THE K.V.K.

8.215 Information regarding suggestions for additional services to be rendered by the K.V.K. has been collected from the individuals. The table below shows the details;

Table No. 8.69  
Suggestions for Additional Services to be Rendered by K.V.K.

S. No.	Name of the Village	No. of Individual	Suggestions for additional services by KVK			
			Production of by product	Marketing strategy	Weather forecasting	Availability of agri. inputs at panchayat level
1	2	3	4	5	6	7
1.	Baaruka	48	30	0	0	18
2.	Antara	38	10	15	9	4
3.	Nipaniya	52	36	8	0	8
	<b>Adopted Village</b>	138	76	23	9	30
4.	Chhatarpur	10	3	1	0	6
5.	Antari	11	5	1	2	3
6.	Simariya	15	9	6	0	0
7.	Katahari	22	1	15	6	0
8.	Purnia	25	5	14	6	0
9.	Jhagraha	49	29	3	0	17
	<b>Cluster Village</b>	132	52	40	14	26
	Total	270	128	63	23	56

8.216 The cent percent individuals have given their useful suggestions about introduction of additional services to be rendered by the K.V.K. Important among these are regarding suggestions about **production of by-product of crops, development of marketing strategy for fair return of the product and making available agricultural inputs at Gram Panchayat Level** wherein 128, 63 and 56 individuals respectively have given their useful suggestions.

8.217 Regarding production of by-product, that may lead to some processing activities, the work may be initiated in liaison with Industries Department of the district.

8.218 Marketing of agriculture produce is gaining importance to avoid the exploitation of farmers by brokers. The intervention of K.V.K. personnel will be very useful if some sort of training is organised for beneficiary cultivators in liaison with Mandi Committees.

8.219 Regarding availability of agriculture inputs at Gram Panchayat level, the K.V.K Scientists may bring home the solution in consultation with the Chief Executive Officer of Zila Panchayat by developing modalities for making available things at Gram Panchayat level.

**8.220 It is, therefore, worth considering to incorporate in the mandate of K.V.K. the subjects like production of by-products and development of marketing strategy for the product of the cultivators.**

#### UTILIZATION OF THE ENHANCED INCOME

8.221 Proper utilization of enhanced income is equally important as compared to its generation. The table below shows the utilization of enhanced income of sample individuals for purchase of various agriculture inputs;

Table No. 8.70  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Tractor		Harvester		Thresher	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Baaruka	48	0	48	0	48	0	48
2.	Antara	38	0	38	0	38	0	38
3.	Nipaniya	52	0	52	0	52	0	52
	<b>Adopted Village</b>	138	0	138	0	138	0	138
4.	Chhatarpur	10	0	10	0	10	0	10
5.	Antari	11	0	11	0	11	0	11
6.	Simariya	15	1	14	0	15	0	15
7.	Katahari	22	0	22	0	22	0	22
8.	Purnia	25	0	25	0	25	3	22
9.	Jhagraha	49	2	47	0	49	0	49
	<b>Cluster Village</b>	132	3	129	0	132	3	129
	Total	270	3	267	0	270	3	267

Table No. 8.70 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Plough		Seed drill		Bullock pair	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	10	11	12	13	14	15
1.	Baaruka	48	0	48	0	48	2	46
2.	Antara	38	10	28	0	38	7	31
3.	Nipaniya	52	0	52	0	52	5	47
	<b>Adopted Village</b>	138	10	128	0	138	14	124
4.	Chhatarpur	10	0	10	0	10	4	6
5.	Antari	11	1	10	2	9	0	11
6.	Simariya	15	7	8	0	15	2	13
7.	Katahari	22	7	15	0	22	2	20
8.	Purnia	25	6	19	3	22	3	22
9.	Jhagraha	49	0	49	1	48	6	43
	<b>Cluster Village</b>	132	21	111	6	126	17	115
	Total	270	31	239	6	264	31	239



Table No. 8.70 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Utilization of Enhanced Income					
			Power/Knapsac sprayer		Handhoe		Storage facility	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	16	17	18	19	20	21
1.	Baaruka	48	0	48	0	48	0	48
2.	Antara	38	0	38	0	38	0	38
3.	Nipaniya	52	5	47	0	52	0	52
	<b>Adopted Village</b>	138	5	133	0	138	0	138
4.	Chhatarpur	10	0	10	0	10	0	10
5.	Antari	11	0	11	0	11	0	11
6.	Simariya	15	0	15	0	15	0	15
7.	Katahari	22	0	22	0	22	0	22
8.	Purnia	25	3	22	0	25	2	23
9.	Jhagraha	49	4	45	0	49	0	49
	<b>Cluster Village</b>	132	7	125	0	132	2	130
	Total	270	12	258	0	270	2	268

Table No. 8.70 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Utilization of Enhanced Income			
			Tube well /Dug well		Electric/diesel motor	
			Yes (1)	No (2)	Yes (1)	No (2)
			22	23	24	25
1.	Baaruka	48	0	48	0	48
2.	Antara	38	0	38	1	37
3.	Nipaniya	52	0	52	0	52
	<b>Adopted Village</b>	138	0	138	1	137
4.	Chhatarpur	10	0	10	0	10
5.	Antari	11	0	11	0	11
6.	Simariya	15	0	15	0	15
7.	Katahari	22	0	22	3	19
8.	Purnia	25	0	25	0	25
9.	Jhagraha	49	0	49	0	49
	<b>Cluster Village</b>	132	0	132	3	129
	Total	270	0	270	4	266

8.222 The above table shows that 92 individuals have utilized their enhanced income for purchase of various agriculture inputs which constitutes 34.07 percent to total number of 270 sample individuals. The purchases are mainly limited on items like tractor, thresher, plough, seed drill, bullock pairs power/knapsac sprayer and electric/diesel motors. The utilization level of enhanced income for purchase of agriculture input is some what encouraging.

## IMPACT OF ENHANCED INCOME OVER EDUCATION LEVELS

8.223 The table below shows the impact of enhanced income over levels of education in our area of study;

Table No. 8.71  
Impact of Enhanced Income Over Levels of Education

S. No.	Name of the Village	No. of Individual	Impact on education due to enhanced income		If yes in what manner				
			Yes (1)	No (2)	More Male Children go to primary/middle (1)	More Female Children go to primary/middle (2)	More male children attend secondary level education (3)	More female children attend secondary level education (4)	Male Female children go for higher education non (5)
1	2	3	4	5	6	7	8	9	10
1.	Baaruka	48	44	4	28	6	5	2	1
2.	Antara	38	30	8	14	9	0	0	0
3.	Nipaniya	52	43	9	33	1	2	0	0
	<b>Adopted Village</b>	138	117	21	75	16	7	2	1
4.	Chhatarpur	10	6	4	5	1	0	0	0
5.	Antari	11	8	3	3	4	0	0	0
6.	Simariya	15	12	3	7	4	0	0	0
7.	Katahari	22	16	6	8	4	2	0	0
8.	Purnia	25	22	3	9	5	4	0	0
9.	Jhagraha	49	44	5	33	34	0	1	0
	<b>Cluster Village</b>	132	108	24	65	52	6	1	0
	Total	270	225	45	140	68	13	3	1

Table No. 8.71 [Contd...]  
Impact of Enhanced Income Over Levels of Education

S. No	Name of the Village	No. of Individual	If no the reasons						
			Educa-tion is no priority (1)	Purchase of agr. inputs (2)	Exp. on religious /social rituals (3)	Purchase of luxutry items like TV fridge two wheeler etc. (4)	Consump-tion of intoxicants (5)	Deposi-ted in the bank (6)	Debt repay-ment (7)
1	2	3	11	12	13	14	15	16	17
1.	Baaruka	48	0	3	0	0	0	0	0
2.	Antara	38	1	6	0	1	0	0	0
3.	Nipaniya	52	4	10	0	0	0	0	0
	<b>Adopted Village</b>	138	5	19	0	1	0	0	0
4.	Chhatarpur	10	0	4	0	0	0	0	0
5.	Antari	11	1	3	0	0	0	0	0
6.	Simariya	15	0	0	0	0	0	0	0
7.	Katahari	22	3	3	1	0	0	0	0
8.	Purnia	25	0	0	0	0	0	0	0
9.	Jhagraha	49	0	3	2	0	0	0	0
	<b>Cluster Village</b>	132	4	13	3	0	0	0	0
	Total	270	9	32	3	1	0	0	0

- 8.224 Out of 270 individuals, 225 individuals [83.33 percent] have reported positive impact of enhanced income over levels of education while 45 number of individuals [16.67 percent] have refused about such impact. The positive impact is predominant in case of primary and middle level of education for both boys and girls wherein 208 individuals [77.04 percent to total individuals] have reported that due to enhanced income more number of boys and girls are being sent to attend elementary level [primary + middle] of education. The positive impact of enhanced income on levels of education shows the awareness of the sample individuals about value of education.
- 8.225 Regarding negative responses by 45 individuals, 9 individuals [33.33 percent to total of 270 individuals] have reported that education is no priority to them while 32 individuals [11.85 percent to total individuals] have given the reason of spending the portions of enhanced income over purchase of agriculture inputs. However all these reasons may be overcome by the extension efforts of K.V.K. personnel by convincing the villagers about value of education while they impart vocational training.

### IMPACT OF ENHANCED INCOME OVER HEALTH STATUS

- 8.226 Health is again an important social factor that accounts for efficiency in pursuance of any occupation. The table below shows the impact of enhanced income over health status of sample population.

Table No. 8.72  
Impact of Enhanced Income over Health Conditions

S. No.	Name of the Village	No. of Individual	Impact on Health		If yes in what manner				
			Yes (1)	No (2)	Services of medical personnel (1)	Vaccination of children/women done (2)	Child nutrition (3)	Female nutrition during gestation (4)	Adoption of Family welfare measures
1	2	3	4	5	6	7	8	9	10
1.	Baaruka	48	48	0	44	0	0	0	0
2.	Antara	38	36	2	13	16	2	1	4
3.	Nipaniya	52	52	0	49	0	3	0	0
	<b>Adopted Village</b>	138	136	2	106	16	5	1	4
4.	Chhatarpur	10	10	0	6	2	2	0	0
5.	Antari	11	10	1	1	7	2	0	1
6.	Simariya	15	15	0	2	5	6	0	2
7.	Katahari	22	16	6	15	3	0	0	1
8.	Purnia	25	25	0	6	9	5	0	5
9.	Jhagraha	49	49	0	24	19	5	1	0
	<b>Cluster Village</b>	132	125	7	54	45	20	1	9
	Total	270	261	9	160	61	25	2	13

Table No. 8.72 [Contd...]

## Impact of Enhanced Income over Health Conditions

S. No	Name of the Village	No. of Individual	If no the reasons						
			Health is no priority	Believe in local healing methods	Purchase of agri. inputs	Exp. on religious functions	Luxury items TV Fridge, Two wheeler, Four wheeler	Consumption of intoxicants	Deposited in bank
1	2	3	11	12	13	14	15	16	17
1.	Baaruka	48	0	0	0	0	0	0	0
2.	Antara	38	1	0	0	0	1	0	0
3.	Nipaniya	52	0	0	0	0	0	0	0
	<b>Adopted Village</b>	138	1	0	0	0	1	0	0
4.	Chhatarpur	10	0	0	0	0	0	0	0
5.	Antari	11	1	0	0	0	1	0	0
6.	Simariya	15	0	0	0	0	0	0	0
7.	Katahari	22	3	1	0	0	0	0	0
8.	Purnia	25	0	0	0	0	1	0	0
9.	Jhagraha	49	0	0	0	0	0	0	0
	<b>Cluster Village</b>	132	4	1	0	0	0	0	0
	Total	270	5	1	0	0	3	0	0

8.227 The above table shows that out of 270 individuals, 261 individuals [96.67 percent to total of 270 individuals] have reported about positive impact of enhanced income over health status which shows the awareness of the sample population about value of keeping good health. The items of positive responses like hiring of the services of medical personnel [160 individuals], vaccination of children/women [61 individuals]. Child nutrition [25 individuals] and adoption of family welfare measures [13 individuals] are indicative of healthy trend since the individuals are more concerned particularly about, the health status of women and children.

**8.228 Though the number of individuals with negative response is only 9 [3.33 percent to total of 270 individuals] but the opinion like health is no priority by 5 number of individuals is a sort of red alert to K.V.K. scientists who must uproot such attitude lest they go deep into the thinking of more individuals.**

### IMPACT OF ENHANCED INCOME OVER POTABLE DRINKING WATER SUPPLY

8.229 The table below shows the details;

Table No. 8.73

## Impact of Enhanced Income over Potable Drinking Water Supply

S. No	Name of the Village	No. of Individual	Improve in potable drinking water	
			Yes	No
1	2	3	4	5
1.	Baaruka	48	1	47
2.	Antara	38	1	37
3.	Nipaniya	52	2	50
	<b>Adopted Village</b>	138	4	134
4.	Chhatarpur	10	0	10
5.	Antari	11	0	11
6.	Simariya	15	0	15
7.	Katahari	22	0	22
8.	Purnia	25	0	25
9.	Jhagraha	49	0	49
	<b>Cluster Village</b>	132	0	132
	Total	270	4	266

8.230 The above table shows a reverse situation where the negative response is to the tune of 266 individuals which is 98.52 percent to total of 270 individuals while the positive response is by 4 individuals [1.48 percent]. These facts show that availability of potable drinking water is no priority in rural areas.

### IMPACT OF ENHANCED INCOME OVER HOUSING CONDITIONS

8.231 The table below shows the details;

Table No. 8.74  
Impact of Enhanced Income over Housing Conditions

S. No	Name of the Village	No. of Individual	Enhancement in income resulted in improved housing contentions	
			Yes	No
1	2	3	4	5
1.	Baaruka	48	20	28
2.	Antara	38	4	34
3.	Nipaniya	52	22	30
	<b>Adopted Village</b>	138	46	92
4.	Chhatarpur	10	5	5
5.	Antari	11	2	9
6.	Simariya	15	3	12
7.	Katahari	22	5	17
8.	Purnia	25	6	19
9.	Jhagraha	49	26	23
	<b>Cluster Village</b>	132	47	85
	Total	270	93	177

8.232 The above table shows that out of 270 individuals, 93 individuals [34.44 percent] have positive responses while 177 individuals [65.56 percent] have refused spending of any amount of enhanced income over improving the housing conditions. The status seems obvious as frequent expenditure over improving the housing condition is not usually done.

### AWARENESS ABOUT WELFARE SCHEMES INITIATED BY THE STATE GOVERNMENT WITH ASSISTANCE FROM GOVERNMENT OF INDIA

8.233 The basic objectives of various welfare schemes initiated by the government are for providing employment opportunities to the target group for augmentation of income thereby improving the quality of life of the individuals/community. Though this information has no direct relevance to the functioning of K.V.K. but its personnel are supposed to popularize such schemes among villagers for taking financial support from such programmes. In the following paragraphs the details of a few important schemes have been given which have direct impact over the livelihoods of sample population.

### JAWAHAR GRAM SAMRIDHI YOJANA

8.234 The former scheme of Jawahar Rojgar Yojna renamed as Jawahar Gram Samridhi Yojna was started from the year 1999-2000 with the basic objective of creating community assets of permanent nature, thereby providing employment to local labour. The survey results show that out of 270 individuals 202 individuals [74.81 percent] are aware of the scheme while rest of 68 individuals [25.19 percent] have no knowledge about the scheme. The scheme is important from the view point of creating community asset that results in availability of employment opportunities. Awareness about this scheme will induce the villagers to assert their demand through Gram Panchayat to develop their area. The K.V.K. personnel may, during their field visits, publicize the utility of the scheme among the villagers.

## **EMPLOYMENT ASSURANCE SCHEME**

8.235 Started from the year 1997-98, the scheme aims at providing employment to rural population during lean season of agriculture thereby creating community assets. **The response to this scheme is somewhat encouraging as 94 individuals [34.81 percent] are aware about the scheme.**

## **ESTABLISHMENT OF HAND LOOM UNITS**

8.236 Under this scheme, the units having 5 to 10 looms are registered and loom-shed subsidy and margin money subsidy are given. **Only 1 person of our sample area is aware of the scheme. When even awareness is not there, there can hardly be any possibility of its implementation in our area of study.**

## **ESTABLISHMENT OF SERICULTURE UNITS**

8.237 Under this scheme the beneficiaries are given training on various aspects of sericulture activities to supplement their income. For this purpose Resham Kendras spread over in districts assume nodal responsibilities to train the beneficiaries and augment their infrastructure. **Non of the individuals from our area of study are aware of the existence of such scheme when the scheme is so important for rural economy. The K.V.K. personnel in liaison with concerned district authorities may take-up a campaign for making villagers aware about the benefits of the scheme.**

## **ESTABLISHMENT OF FAMILY BASED RURAL INDUSTRIAL UNITS**

8.238 The scheme is implemented by the Madhya Pradesh Khadi and Gramodoyog Board. Under this scheme the units pertaining to SC, ST and OBCs are given 90 percent subsidy on capital loan and remaining 10 percent loan is given by the banks. The level of awareness about this scheme is discouraging as 6 individuals [2.22 percent to total of 270 individuals] are aware about this scheme.

## **MID DAY MEALS**

8.239 The programme has proved to be an effective incentive for retention of school going children relating to primary education, specially the children coming from low income group. Under this programme cooked meals are provided to the school going children. **The level of awareness of this scheme in our area of study is 96.30 percent.**

## **FREE SUPPLY OF TEXT BOOKS**

8.240 Under this scheme all the students of primary standard [classes 1<sup>st</sup> to 5<sup>th</sup>] belonging to SC, ST and OBCs and students of classes 1<sup>st</sup> to 3<sup>rd</sup> standards belonging to general communities are given text books free of cost. As per our survey results 184 individuals [68.15 percent] are aware about the scheme while 86 individuals [31.85 percent] are not aware of the scheme. **Since the supply of text books free of cost is mandatory, the individuals unaware of the scheme are either persons having their wards above primary standards of education or the rate of drop-out is so high that they are not particular about the scheme. However, efforts both by persons of school education department and K.V.K. may reduce such extent of unawareness.**

## WOMEN SELF HELP GROUP

8.241 With view to ensure social and economic empowerment of women, self help groups [S.H.Gs.] are formed for making the women confident to face challenges on all fronts, be it social or economic. In this scheme, the members of the group deposit a part of their saving in the fund raised by the group and may take loan to meet their various social and economic obligations, subject to return of the amount with interest. In our area of study 252 individuals [93.33 percent] are aware of this scheme which, ofcourse, is very encouraging that indicates the awareness of individuals about the value of such institution. Unawareness aspect for 18 individuals may easily be overcome by little more extension efforts by concerned government officials and persons of K.V.K.

## GRAMYA YOJNA

8.242 Under this scheme the poor women are given interest free loan upto Rs. 500.00 towards starting a small business. After repayment of the first loan within one year, second loan to the tune of Rs. 1500.00 is given. In our area of study, 193 number of individuals [71.48 percent] are aware of this scheme **which is satisfactory.**

## AUSMATI YOJNA

8.243 With the objective of providing better medical assistance to the women belonging to the families living below the poverty line in rural areas, this scheme was started in the year 1999. **For this scheme also the extent of awareness by 163 individuals [60.37 percent] is satisfactory.**

**8.244 In what follows an attempt has been made to summarise the details of individual particulars of adopted and cluster villages.**

- **The frame of the present part of the narration is 270 individuals which is 25 percent of the family members of 25 percent sample households belonging to adopted and cluster villages.**
- **The criteria for selection of individuals are – the persons should be the adult member of the family, he/she should be associated with any programme of the K.V.K., he/she should be literate – may be without having any formal education.**
- **The majority of 119 individuals are from community of S.T. that accounts for 44.07 percent to total of 270 individuals from adopted and cluster villages.**
- **The cent-percent sample individuals from our area of study are the followers of Hindu religion.**
- **The cent-percent awareness of the individuals about the K.V.K. in terms of its location and more importantly the services rendered by it is an important achievement of the K.V.K.**
- **The awareness about specific services rendered by the K.V.K. is substantial.**
- **Regarding regular contact with K.V.K. the survey results show the regular contact of 89.63 percent individuals mainly because of the desire for adopting new technology and for obtaining quality seed. The positive impact of the efforts of the K.V.K. is clearly visible.**
- **Out of 270 individuals, 263 individuals have implemented the services of K.V.K. which is 97.41 percent to total respondents which in itself is an achievement of K.V.K's efforts.**
- **In the field of agronomy maximum number of 266 individuals [98.52 percent to total of 270 individuals] have implemented the improved technique, followed by 65 individuals [24.07 percent] for home science and 19 individuals implementing the techniques regarding organic farming.**

- The cent percent satisfaction level of individuals regarding impact of K.V.K. services is landable.
- Agronomy and home science are the subjects for which the satisfaction level is substantial. In subjects like horticulture, animal husbandary, agro-forestry, fishery, poultry and training of rural youth the satisfaction level is nil because of the basic fact that for these subjects no vocational training in tangible way has been imparted nor the FLDs or OFTs have been organised. Efforts must be made to popularize the activities like animal husbandry, agro-forestry and watershed activities as these fields have immense promise of employment generation followed by income augmentation in rural areas.
- About 99 percent positive response regarding impact of K.V.K. services over income enhancement has been reported which is of credit to the efforts of K.V.K. in various fields of its operation.
- The extent of income enhancement in the percentage group of 1 to 10 has been reported by 247 persons [91.49 percent] due to impact of various technologies introduced by K.V.K. which, in itself, is a startling achievement.
- Out of 270 individuals, 269 individuals [99.63 percent to total individuals] have reported for the continuance of the services of K.V.K. particularly for subjects like agronomy, home science and organic farming which again shows the positive impact of the services rendered by K.V.K.
- Regarding suggestions for additional services to be rendered by K.V.K. the sample individuals have given useful suggestions regarding introduction of production of by-products of crops and development of marketing strategy for fair return of the product for incorporation in the training mandates of K.V.K.
- As regards utilization of enhanced income, 92 individuals [34.07 percent] have informed about purchase of various agriculture inputs out of their income enhancement.
- Out of 270 individuals, 225 individuals [83.33 percent] have reported positive impact of income enhancement over levels of education particularly over the levels of primary education for both boys and girls that shows the awareness of sample individuals about value of educating their wards.
- Out of 270 individuals, 261 individuals [96.67 percent to total of 270 individuals] have reported about positive impact of enhanced income over health status resulting in hiring of the services of medical personnel, vaccination of children/women, better application of child nutrition and adoption of family welfare measures.
- A reverse situation is visualized in case of potable drinking water supply where the negative response is to the tune of 266 individuals [98.52 percent] which shows that the availability of potable drinking water is no priority in rural areas in general and in our area of study in particular against the basic problem of enhancing agriculture income.
- Regarding impact of enhanced income over improving housing conditions, 93 individuals [34.44 percent] have positive response while 177 individuals [65.56 percent] have refused spending any amount of enhanced income over improving the housing conditions. The situation seems obvious as frequent expenditure over improving housing conditions is not done.
- Regarding awareness about various welfare schemes initiated by the State Government with assistance from Government of India, it has been observed that in case of schemes like Jawahar Gram Samridhi Yojna, Employment Assurance Scheme, Mid-Day Meals, Free Supply of Text Books, Women Self Help Group, Gramya and Ausmati Yojna the level of awareness is encouraging while in respect of schemes like Establishment of Hand Loom Units, Establishment of Sericulture Units and Establishment of Family Based Rural Industrial Units the level of awareness is poor.



## RESULTS OF SURVEY–INDIVIDUAL PARTICULARS–CONTROL VILLAGE

- 6.245 In the following paragraphs an attempt has been made to record the reactions of 25 percent of individuals taken from control village of Kerhai where there is no intervention of KVK. The Total number of family members of the 25 percent of the households in village Pipariya Birsa is 61, the twenty five percent of which is 15 individuals. Therefore, the reactions of 15 number of individuals have been recorded to have a comparison with the reactions of individuals of adopted and cluster villages having direct intervention of KVK. The criteria for selection of individuals for control village are similar to that for adopted and cluster villages.
- 8.246 Like adopted and cluster villages, 9 individuals out of 15 individuals [60.00 percent] are from S.T. community, only 6 individual are from O.B.C. community. No persons belong to S.C. and General communities. All the individuals from the control village are the followers of Hindu religion.
- 8.247 Regarding awareness about the **existence of KVK, 6 individuals of control village are aware of the its existence against the cent-percent awareness about K.V.K. in-terms of its location and services rendered by it by the individuals of adopted and cluster villages which seems obvious as in such cases the interventiojn of K.V.K. is direct.** Regarding awareness about he services of K.V.K. the cent percent response in the control village is negative. Awareness is the basic paramter that leads to positive impact of any activity over a long period of time. **The ultimate aim of any K.V.K. is to cover the entire district in terms of implementation of prevailing and new technology relating to agriculture and its allied activities that presupposes awareness about this organisation by the farming community of the district. For this purpose the K.V.K. personnel of district Shahdol may organize meetings at Gram Panchayat level at least twice in a year inviting one representative from villages where there is no intervention of K.V.K. to make them aware about the utility of services rendered by the K.V.K.**
- 8.248 **Regarding satisfaction derived from per hectare yield of agronomical and horticulture crops, the cent percent individuals of control village have expressed their dissatisfaction while for adopted and cluster villages this satisfaction level is substantial. However for improving the per-hectare yield, 10 number of individuals from control village which is 66.67 percent to total of 15 individuals have suggested for organizing training for water conservation methods, followed by 4 individuals [26.67 percent] for organizing training about application of inputs.**
- 8.249 Regarding satisfaction level of livestock and dairy activities cent percent individuals have expressed their dissatisfaction **The suggestions forwarded** are making available the improved breed production facilities by 12 individuals [80.00 percent] followed by improved feed facility by 1 individuals [6.67 percent] and one individual [6.67 percent] has opined for regular vaccination facilities. **It will be worth mentioning that even in cases of adopted and cluster villages the satisfaction level for livestock and poultry activities is nil.**
- 8.250 As for poultry development the level of dissatisfaction is again cent-percent. **The important suggestions** forwarded are arrangement of improved breeding facilities by 10 individuals [66.67 percent] and providing broiler production facilities by 3 individuals [20.00 percent]. **In case of adopted and cluster villages also the satisfaction level for this activity is nil.**

- 8.251 Regarding fishery development, again the level of dissatisfaction is cent-percent **supported by the suggestions** like supply of improved feed by 11 individuals [73.33 percent] followed by arranging training about use of improved implements by 4 individuals [26.67 percent] **It is worth mentioning** again that for adopted and cluster villages the level of satisfaction for this activity is nil.
- 8.252 Important information has been collected about adoption of home science activities for augmentation of family income. **Toy making** is one such activity where cent percent individuals have asked for training facility followed by **pickle preparation** by 11 individuals [73.33 percent]. **Training regarding baking activities** have also been supported by 3 individuals, papad/jam/jelly making by 6 individuals, jute items by 3 individuals and food preservation by 3 individuals. **It is again worth** mentioning that in case of adopted and cluster villages the positive response in favour of home science activities is substantial.
- 8.253 Regarding training of rural youth for self employment, cent percent individuals have **suggested** for organizing training programme for **motor binding** which is very relevant for performing agricultural activities followed by 9 individuals in favour of training courses for repair of **diesel engine** that accounts for 60.00 percent to total of 15 sample individuals. For activities like **black smithy, carpentry, masonry, tailoring and cycle/scooter repairs** individuals to the tune of 6,1,1,3,9 respectively have suggested for organizing training courses. It will not be out of place to mention here that in case of adopted and cluster villages, no individual has shown any inclination for such activities regarding training of rural youth.
- 8.254 Regarding educational status of the sample individuals of control village, the survey results show that out of 15 individuals, 4 persons [26.67 percent] have reported positively about their male children attending the **elementary level of education** [primary + middle i.e. classes 1<sup>st</sup> to 8<sup>th</sup> standards] while the response from 11 individuals [73.33 percent] for this item are negative. More or less similar is the situation with girls wherein 9 number of individuals [60.00 percent] have given positive response while 6 number of individuals [40.00 percent] were negative in their responses. Similarly regarding boys students of **secondary level of education**, i.e. from from classes 9<sup>th</sup> to 12<sup>th</sup> standards only 1 individual [6.67 percent] have informed that their male and female wards attend the school. In case of **higher education** for both male and female children the positive responses is nil. **In case of adopted and cluster villages 83.33 percent individuals have reported about their male and female wards attending the elementary level of education that shows better awareness among the sample inhabitants of adopted and cluster villages about value of elementary education.**
- 8.255 Regarding health status the following table presents a comparative picture between adopted and cluster villages on one side and the control village on the other;

Table No. 8.75  
Comparative Status of Health Facilities Among Sample Individuals

Sl. No.	Item	Status of control village – percentage to total 15 sample individuals	Status of adopted and cluster villages percentage to 270 sample individuals
1	Hiring of services of medical personnel	26.67	59.26
2	Vaccination of children/ pregnant mother	66.67	22.59
3	Child nutrition	66.67	9.26
4	Female nutrition during gestation period	60.00	0.74
5	Adoption of family welfare measures	40.00	4.81

**Note – Only positive responses have been taken into account.**

- 8.256 The above table shows that except for the item of hiring of services of medical personal where the positive response of individuals from adopted and cluster villages is higher than control village, **in rest of the health parameters the percentage positive responses of the individuals of control village are much higher than that of adopted and cluster villages that shows the relatively higher level of awareness among the sample individuals of control village regarding various health parameters.**
- 8.257 Regarding status of drinking water facilities, cent percent individuals have responded positively about availability of hand pumps as main source of drinking water. Piped water supply is not in existence in the sample village which seems obvious as in villages in general this facility is seldom available. **In case of adopted and cluster villages also the majority of respondents have informed about hand pums as main source of drinking water in their villages.**
- 8.258 Regarding housing facilities, 1 number of individual each has reported for construction of semi-pucca houses and construction of pucca house.
- 8.259 The table below shows the comparative level of awareness about the various welfare schemes between adopted/cluster villages and control village;

Table No. 8.76  
Comparative Levels of Awareness

Sl. No.	Name of the Scheme	Level of awareness in percentage for adopted/cluster villages [percent to total of 270 individuals]	Level of awareness in percentage for control village [percent to total of 15 individuals]
1	Jawahar Gram Samridhi Yojna	74.81	6.67
2	Employment Assurance Scheme	34.80	86.67
3	Establishment of Hand Loom Units	0.37	-
4	Establishment of Sericulture Units	-	-
5	Establishment of family based rural industrial Units	2.22	-
6	Mid-day Meals	96.30	86.67
7	Free supply of Text Books	68.15	20.00
8	Women Self Help Group	93.33	46.67
9	Gramya Yojna	71.48	6.67
10	Ausmati Yojna	60.37	53.33

- 8.260 The above table shows that except for employment assurance scheme the level of awareness about rest of welfare schemes is much higher in adopted/cluster villages as compared to control village. Regarding schemes like Establishment of Hand Loom Units, Establishment of Sericulture Units and Establishment of family based rural industrial Units the level of awareness among individuals of control village is nil while that for adopted and cluster villages the level of awareness is marginal. The validity of such schemes therefore is doubtful as since the awareness about these schemes are missing, the plight of their implementation may well be imagined.
- 8.261 In what follows an attempt has been made to summarise the findings of individual particulars of the control village;
- The majority of individuals i.e. 60.00 percent to total of 15 sample individuals are from S.T. community. Cent percent individuals are followers of Hindu religion.

- The 40.00 percent level of awareness among sample individuals of control village about the services rendered by the K.V.K. is slightly a matter of concern which shows that a portion of population is unaware about prevailing and new technology relating to agriculture and allied services. Since the ultimate objective of any K.V.K. is to cover the farming communities of entire district, it will, therefore, be worthwhile if the K.V.K. Scientists organize meetings at Gram Panchayat level – twice in a year, inviting representative cultivators from control village and apprise them with latest technology or suggest them to be in regular contact with the cultivators of adopted and cluster villages who are already implementing technologies both prevailing and new relating to agriculture and allied activities.
- Regarding satisfaction level of per hectare yield of agronomical and horticultural crops, the cent percent individuals of control village have expressed their dissatisfaction with suggestions to organize training activities on water conservation methods and application of agriculture inputs.
- Regarding satisfaction level derived from present status of livestock and dairy activities cent percent individuals have expressed their dissatisfaction. The suggestions forwarded are making available the improved breed production facilities and regular vaccination facilities.
- As for poultry development the level of dissatisfaction is again cen-percent. The important suggestions forwarded are arrangement of improved breeding facilities and providing broiler production facilities.
- Similarly for fishery development the level of dissatisfaction is cent-percent supported by the suggestions like supply of improved feed and arranging training about use of improved implements.
- For augmentation of income levels, cent percent individuals are in favour of toy making activities followed by pickle preparation by 73.33 percent individuals, backing activities by 20.00 percent individuals and preparation of papad/jam/jelly by 40.00 percent individuals.
- Regarding training of rural youth for self employment, considerable interests hve been shown by the sample individuals of control village pertaining to activities like motor binding, repair of diesel engine, black smithy, carpentry, msonary, tailoring and cycle/scooter repair etc.
- Regarding elementary level of education [classes 1<sup>st</sup> to 8<sup>th</sup> standards] 26.67 percent individuals have reported that their male wards attend the school where as for female wards 60.00 percent individuals have reported in favour of their school attendance.
- A very satisfactory level of health scenario is existing in control villge wherein for most of the basic health parameters the percentage positive response is much higher than the responses from adopted and cluster villages.
- Hand pumps are the main source of drinking water in our control village where cent percent individuals have reported for its existence.
- Regading housing facilities the individuals of control village have shown interest in constructing semi-pucca houses and puccs houses.
- The level of awareness about various welfare schemes initiated by the government is much higher in case of adopted/cluster villages as compared to control village.

## Chapter Nine

### KRISHI VIGYAN KENDRA - TIKAMGARH

- 9.1 The district Tikamgarh is located in between 24.26<sup>0</sup> to 25.40<sup>0</sup> north latitude to 78.26<sup>0</sup> to 79.26<sup>0</sup> east longitude with total geographical area of 5048 squ.km. which is 1.64 percent to total geographical area of the State.
- 9.2 The average annual rainfall of the district is 765.00 mm concentrated over the months of June to September. The average maximum temperature during summer is around 41.58<sup>0</sup> celcius while the average minimum temperature during winter is 3.30<sup>0</sup> celcius.
- 9.3 The total population of the district as per census 2001 is 1202998 persons with rural and urban breakups of 990623 and 212375 persons respectively which is 82.35 percent and 17.65 percent to total population respectively. The percentage of scheduled caste population to total population (as per census 2001) is 24.29 while that of S.T. population is 4.32. The percentage of workers engaged in the occupation of agriculture (as per census 1991) to total workers is 69.85 that shows agriculture is the main stay of the population of Tikamgarh district. In the following table a few indicators relating to agriculture has been shown;

Table No. 9.1  
Important Indicators Relating to Agriculture

Sl. No.	Indicators	District Tikamgarh	State of Madhya Pradesh
1	2	3	4
1	Percentage of forest area to total geographical area [ha]	13.29	26.65
2	Net cropped area as percent to total geographical area [ha]	52.31	49.02
3	Per-capita net cropped area [ha]	0.23	0.25
4	Per-capita gross cropped area [ha]	0.35	0.34
5	Percentage of double cropped area to net cropped area [ha]	53.58	35.49
6	Net area irrigated as percent to net cropped area [ha]	66.38	37.56
7	Gross area irrigated as percent to gross cropped area [ha]	53.56	28.54
8	Per-capita production of food-grains [Kg.]	336	266
9	Per hectare use of fertilizer [Kg.]	55.03	46.21
10	Gross value of agriculture produce-per hect. [Rs.]	11881	11968
11	Per hectare yield of agriculture produce [Kg.]*		
a)	Paddy	887	1058
b)	Wheat	2162	1867
c)	Jowar	1379	1342
d)	Maize	1226	2072
e)	Gram	1473	932
f)	Tuar	582	825
g)	Soybean	1462	1137
12	Electrified villages as percent to total inhabited villages	99.88	97.04
13	Energised pump sets per thousand hectare	71	60

\*Figures relate to the year 2003-2004 [Final Forecast]

- 9.4 The per-hectare yield of the most of the crops for district Tikamgarh is more than State average mainly due to better irrigation facilities and extensive use of fertilizer.

## DETAILS OF KRISHI VIGYAN KENDRA, TIKAMGARH BASED ON THE SECONDARY INFORMATION

- 9.5 The K.V.K., Tikamgarh was established in the year 1994. It is located in the Tikamgarh Development Block of the District. It is being run under the control of J.N.K.V.V., Jabalpur with Training Organizer as chief of the K.V.K., having six number of technical staff and three number of non-technical staff. The technical staff mainly consists of training associates and technical assistant mainly from the disciplines of Agronomy, Agriculture Extension and Food Science. The farm area of the K.V.K. is 20 hect, entirely irrigated and cultivated. The KVK has got administrative building of its own.
- 9.6 The K.V.K. has its own demonstration units like dairy unit, poultry unit along with existence of farmer's hostel where the cultivators can be accomodated during training courses. Regarding availability of irrigation facilities the K.V.K. has 2 number of tubewells, 2 number of diesel operated pump sets and one electric engine sufficient to irrigate 20 hectares of land. The K.V.K. has also got one four wheeler to cater to the transportation needs.
- 9.7 The K.V.K. has adequate number of agricultural implements as detailed below;
1. Tractor – 1
  2. Trolly –1
  3. Cultivator – 1
  4. Thresher – 1
  5. Tractor drawn Ferti seed drill –1
  6. Harrow –1
  7. Sprayers –2

These variety of implements are, more or less, sufficient to do the extension work with reasonable efficiency.

- 9.8 The K.V.K. receives an average allocation of Rs. 27.47 lakh per year over the years 2001-2002 to 2003-2004 against which the average expenditure per year is Rs. 23.94 lakh. The table below shows the details;

Table No. 9.2  
Budget Allocation and Expenditure *Rs. Lakh*

Sl. No.	Particulars	2001-2002		2002-2003		2003-2004		Remarks
		Alloca- tion	Expen- diture	Alloca- tion	Expen- diture	Alloca- tion	Expen- diture	
1	2	3	4	5	6	7	8	9
<b>1.</b>	<b>RECURRING EXPENDITURE</b>							
a	Pay and Allowances	15.00	17.57	4.00	1.44	3.50	3.49	
b	Travelling Allowances	0.50	-	-	-	-	-	
c	Contingencies	-	-	-	-	-	-	
	<b>Total – 1</b>	<b>15.50</b>	<b>17.57</b>	<b>4.00</b>	<b>1.44</b>	<b>3.50</b>	<b>3.49</b>	
<b>2.</b>	<b>NON-RECURRING EXPENDITURE</b>							
a	Equipments	1.61	0.61	-	-	2.85	0.82	
	<b>Total 2</b>	<b>1.61</b>	<b>0.61</b>	<b>-</b>	<b>-</b>	<b>2.85</b>	<b>0.82</b>	
	<b>Grand Total 1+2</b>	<b>17.11</b>	<b>18.18</b>	<b>4.00</b>	<b>1.44</b>	<b>6.35</b>	<b>4.31</b>	

- 9.9 The above table shows a more or less matching share of expenditure against allocation. The major share of allocation is for pay and allowances against very small allocation for performing technical functions which at times lead to in-efficient performance. **Re-scheduling of allocation is, perhaps necessary.**

9.10 Regarding Technical performance, the information has been collected under following heads;

- Vocational Training
- In-service Training
- Front Line Demonstration
- On Farm Testing.

9.11 In what follows an attempt has been made to present the details of the above mentioned items of technical performance.

## VOCATIONAL TRAINING

9.12 The table below shows the details;

Table No. 9.3  
Status of Vocational Training

Sl. No.	Subject	No. of trainings organised -2003-2004			Total no. of trainees 2003-2004
		Adopted Villages	Cluster Villages	Other Villages	
1	2	3	4	5	6
1	Crop Production	1	4	-	159
2	Horticulture	1	4	-	58
3	Plant Protection	1	4	-	307
4	Veterinary Services	1	4	-	23
5	Home Science	1	-	-	-
6	Ag. Engineering	1	-	-	-
7	Training of Rural Youth for Self Employment				
a.	Plant Protection	-	4	-	44
	Total	6	20	-	591

Note : Other villages [Col. 5] indicate those villages of the district where the training programmes of Agriculture Department are imparted through K.V.K.

9.13 The above table shows that the total number of vocational trainings organised in the year 2003-2004 was 26 which was, not very satisfactory. **More number of vocational training should have been organised on horticulture as this is one of the important fields of quick income generation with availability of ready market. The organisation of only 4 number of training courses to impart training to rural youth for self employment and attended by only 44 persons [7.45% to total trainees] is indicative of the fact that the villagers are not very confident about such trainings which hardly gurantee any placement.**

9.14 The combined percentage of trainees attending subjects like crop production, plant protection and horticulture to total number of trainees was 88.66 that confirms the fact that farming communities are more interested to enhance their income through adoption of technology particularly in the field of crop production.

## IN SERVICE TRAINING

9.15 This training is related to the field functionaries of Agriculture, Veterinary, Horticulture and Forest Departments. The following table shows the details;

Table No. 9.4  
Status of In-service Training

Sl. No.	Subject	No. of trainings 2003-2004		Total number of trainees 2003-2004
		On campus	Off campus	
1	2	3	4	5
1	Crop Production	133	-	133
2	Plant Protection	957	-	957
	Total	90	-	90

9.16 Though the number of training programmes conducted in the year 2003-2004 is satisfactory, arrangement of a few more training programmes particularly for Horticulture would have been more helpful.

### FRONT LINE DEMONSTRATION

9.17 Front line demonstrations are conducted under the close supervision of the scientists of the KVK for newly released technologies or those likely to be released in near future with target participants both farmers and extension officers. The table below shows the number of front line demonstrations conducted in the year 2003-2004.

Table No. 9.5  
Status of Front Line Demonstrations

Sl. No.	Subjects	No. of demonstrations 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Pulses	25	4
2	Oil Seeds	25	4
3	Other than pulses and oilseeds	12	4
	<b>Total</b>	<b>62</b>	<b>12</b>

9.18 The total of 74 FLDs organised in one year in both adopted and cluster villages are satisfactory.

### ON FARM TESTING

9.19 On farm testing is a part of adaptive research that takes into account existing technology and its application over defined areas and defined group of farmers. The following table shows the details;

Table No. 9.6  
Status of On Farm Testing

Sl. No.	Subject	No. of demonstrations 2003-2004	
		Adopted Villages	Cluster Group of Villages
1	2	3	4
1	Testing of improved varieties of paddy under upland condition	5	4
2	Testing of weed control method in up land paddy	5	4
3	Control of Dowdery mildew in coriander	5	4
4	Control of Carly Blight in Potato	5	4
	<b>Total</b>	<b>20</b>	<b>16</b>



9.20 Organisation of 36 number of on farm testing in one year is an encouraging picture.

9.21 Besides organizing training courses on Vocational Training, In Service training, Front Line Demonstration and On Farm Testing, the K.V.K., Tikamgarh has also organised other training programmes in liaison with the line departments of State Government. The table below shows the details;

Table No. 9.7  
Record of Other Training Courses

Sl. No.	Topic	Year 2003-2004	
		Duration – Days	Organised by
1	2	3	4
1	Krishi Pakhwara	6	Department of Agriculture
2	Bio-farming	1	Department of Agriculture
3	Training on IPM	1	Department of Agriculture
4	Training on IPM	1	Department of Agriculture
5	Biological Cultivation	1	Department of Agriculture
6	Puse Development Programme	1	Department of Agriculture
7	Scientists interaction with farmers	1	Department of Agriculture
8	Integrated Cereal [Rice] Development Programme	2	Department of Agriculture

9.22 The above table shows that most of the training courses organised were related to crop production which seems obvious as the cultivators are usually interested in enhancement of agriculture production. A few number of trainings relating to home science and training of rural youth for self employment could have been organised which would have made such efforts more meaningful. However, it has also been felt that every training programme should have a minimum duration of 4 days to ensure purposeful transaction as about half of the day on the first day in case of most of such meetings is usually lost in observing formalities.

9.23 One of the important functions of the K.V.K. is to conduct specific research to improve the quality of agriculture produce. The K.V.K., Tikamgarh has not conducted any such specific research during the year 2003-2004.

9.24 Each K.V.K. is supposed to hold the meeting of Scientific Advisory Committee twice in a year for performing following functions;

9.25 The Scientific Advisory Committee will consist of following members;

- |    |  |             |
|----|--|-------------|
| 1. | Head of the host institution   | Chairperson |
| 2. | Director, Extension of concerned SAU   | Member      |
| 3. | Zonal Coordinator of the concerned zone  | Member      |
| 4. | Representative of ICAR Instt./ICAR Regional Research Station if located in the district or nearby  | Member      |
| 5. | Associate Director, Research & Extension of the Zonal Research Station in which KVK is located   | Member      |
| 6. | District officers of the line departments such as Agriculture, Horticulture, Animal Husbandry, Soil conservation, Social/Agroforestry, Sericulture, Fisheries, Irrigation, Social Welfare, Small Scale Industries etc. | Members     |
| 7. | Representative of the Lead Bank of the District  | Member      |
| 8. | Farm Radio Officer of the AIR in which KVK is located  | Member      |
| 9. | Representative of Doordarshan Centre in which KVK is located   | Member      |

10. Two representatives of the farmers - one small and one big nominated by the Head of the Institution Member
11. Two representatives of Farm Women nominated by Head of the Institution Members
12. Training Organiser, KVK Member Secretary
- 9.26 No specific information has been given by the K.V.K. Tikamgarh about holding meetings of Scientific Advisory Committee.
- 9.27 The K.V.K., Tikamgarh has continuously interacted with district administration, three-tier system of Panchayati Raj Institutions and progressive cultivators of the district and took valuable guidance from them. Publicity measures like organizing Krishi Melas, Field Days, arranging T.V. Interviews and Radio talks were attempted to spread the knowledge about utility of K.V.K. among rural population.

## RESULTS OF THE SURVEY – VILLAGE PARTICULARS

- 9.28 The study has covered sixty number of villages with ten number of villages from each K.V.K. with bifurcation as follows;

- Three number of Adopted Villages
- Six number of Cluster Villages
- One number of Control Village

The bifurcation as shown above is common to all the six K.V.Ks. covered under the study. The table below gives a few important demographic details of the selected villages of K.V.K., Tikamgarh;

Table No. 9.8  
Demographic Particulars

Sl. No.	Name of the Village	Name of the Dev. Block	Total population Census 2001	Of which		Proportion of S.C. population [%]	Proportion of S.T. population [%]	Literacy rate [%]	Household size
				Males Census 2001	Females Census 2001				
1	2	3	4	5	6	7	8	9	10
<b>ADOPTED VILLAGES</b>									
1	Surajpur	Tikamgarh	398	210	188	30.9	0.0	48.0	6.0
2	Minnora	Tikamgarh	923	495	428	47.5	5.1	64.6	4.0
3	Charpuan	Tikamgarh	940	502	438	39.8	0.0	58.9	6.0
<b>Total – I</b>			<b>2261 [31.40]</b>	<b>1207 [31.88]</b>	<b>1054 [30.86]</b>	-	-	-	-
<b>CLUSTER VILLAGES</b>									
4	Sujanpura	Tikamgarh	80	46	34	87.5	0.0	62.0	7.0
5	Papawani	Tikamgarh	1215	620	595	24.0	4.6	52.4	6.0
6	Bauri	Tikamgarh	907	484	423	12.5	5.2	50.6	8.0
7	Khiriya	Tikamgarh	719	375	344	42.6	11.5	58.2	7.0
8	Ganeshganj	Tikamgarh	725	367	358	57.1	1.9	54.1	6.0
9	Manikpura	Tikamgarh	864	443	421	3.1	1.0	43.2	6.0
<b>Total – II</b>			<b>4510 [62.63]</b>	<b>2335 [61.67]</b>	<b>2175 [63.69]</b>	-	-	-	-
<b>CONTROL VILLAGE</b>									
10	Neemkhera	Tikamgarh	430	244	186	1.4	0.0	65.7	8.0
<b>Total – III</b>			<b>430 [5.97]</b>	<b>244 [6.45]</b>	<b>186 [5.45]</b>	<b>1.4</b>	<b>0.0</b>	<b>65.7</b>	<b>8.0</b>
<b>Grand Total I+II+III</b>			<b>7201 [100]</b>	<b>3786 [100]</b>	<b>3415 [100]</b>				

Source – Census 2001, Note – Figures in brackets show percentage to total.

**9.29** The total population of the ten identified villages as per census – 2001 is 7201 which is 0.73 percent of the total rural population of district Tikamgarh. The adopted villages cover 31.40 percent population as compared to total population of ten identified villages covered under the study while for the cluster villages this percentage is 62.63 to the population of ten villages and for control village the percentage coverage of population is 5.97. The largest village, population wise is Papawani [cluster village] while the smallest village is Sujanpura [cluster Village]. In all the villages, the male population is more than female population. In all the ten identified villages the proportion of SC population is more than that of ST population. The percentage literacy ranged between 43.2 for village Manikpura to 65.7 percent for village Neemkhera, not far below the district level percentage literacy of 55.80 and state level figure of 64.11. The above information has pleasantly defied the age-old notion of low percentage literacy in S.C. predominated areas. The average size of the family is 6 persons which, to some extent, is satisfactory in context of rural areas.

## WORK FORCE

**9.30** An analysis of the information regarding workforce for all the ten villages covered under the study will give an idea of the persons engaged in different occupations and also the magnitude of dependent population not pursuing any occupation. The table below shows the details;

Table No. 9.9  
Status of Work Participation

Sl. No	Name of the Village	Work participation rate [%]			Proportion of main workers [%]			Proportion of Marginal workers [%]			Proportion of Non-workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Surajpur	26.6	50.0	0.5	26.6	50.0	0.5	0.0	0.0	0.0	73.4	50.0	99.5
2	Minnora	42.2	45.1	43.2	29.5	39.4	18.0	14.7	5.7	25.2	55.8	54.9	56.8
3	Charpuan	48.0	50.8	44.7	34.9	47.6	20.3	13.1	3.2	24.4	52.0	49.2	55.3
<b>CLUSTER VILLAGES</b>													
4	Sujanpura	58.8	56.5	61.8	41.3	50.0	29.4	17.5	6.5	32.4	41.3	43.5	38.2
5	Papawani	51.9	51.6	52.1	36.5	47.4	25.2	15.3	4.2	26.9	48.1	48.4	47.9
6	Bauri	44.8	47.3	41.8	34.5	35.7	33.1	10.3	11.6	8.7	55.2	52.7	58.2
7	Khiriya	49.4	50.1	48.5	23.9	43.5	2.6	25.5	6.7	45.9	50.6	49.9	51.5
8	Ganeshganj	40.1	52.0	27.9	27.0	49.3	4.2	13.1	2.7	23.7	59.9	48.0	72.1
9	Manikpura	44.9	48.5	41.1	35.4	43.6	26.8	9.5	5.0	14.3	55.1	51.5	58.9
<b>CONTROL VILLAGE</b>													
10	Neemkhera	52.3	47.1	59.1	35.1	43.0	24.7	17.2	4.1	34.4	47.7	52.9	40.9

Source – Census 2001

**9.31** The above table shows that the work participation rate ranged between 26.6% for village Surajpur [adopted village] to 58.8% for village Sujanpura [cluster village]. Out of identified villages in 3 number of villages viz. Sujanpura, Papawani and Neemkhera the proportion of female worker is more than of males, an healthy indication showing the intent of the female population to contribute meaningfully towards households income. The proportion of main workers which is, in general, higher than the porportion of marginal workers, ranged between 23.9 percent for village Khiriya [cluster village] to 41.3 percent for village Sujanpura [cluster village]. In cent percent sample villages the male participation as main workers is higher than female participation while a reverse situation is seen in case of marginal workers where female participation is higher than male participation. This shows

that in our sample area of study avenues of activities other than agriculture like preparation of papad/bari/jelly, toy making etc are available that employes substantial number of rural female population. The proportion of non-workers that ranged between 41.3 percent for village Sujanpura [cluster village] to 73.4 percent for village Surajpur [adopted village] presents a dismal picture as it shows the higher number of dependent population consisting mainly of children, old persons, infirms and unemployed who are not in position to contribute much towards family income.

## OCCUPATIONAL DISTRIBUTION

9.32 The table below shows the details;

Table No. 9.10  
Occupational Distribution

Sl. No	Name of the Village	Proportion of Cultivators to total Workers [%]			Proportion of Agr. Labourer to total workers [%]			Proportion of workers in household industries to total workers [%]			Proportion of other workers to total workers [%]		
		Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>ADOPTED VILLAGES</b>													
1	Surajpur	89.6	89.5	100.0	9.4	9.5	0.0	0.0	0.0	0.0	0.9	1.0	0.0
2	Minnora	36.8	37.7	35.7	44.4	33.6	57.3	0.2	0.4	0.0	18.6	28.3	7.0
3	Charpuan	75.4	71.8	80.1	7.1	7.5	6.6	0.2	0.0	0.5	17.3	20.8	12.8
<b>CLUSTER VILLAGES</b>													
4	Sujanpura	38.3	38.5	38.1	53.2	46.2	61.9	0.0	0.0	0.0	8.5	15.4	0.0
5	Papawani	95.1	93.4	96.8	1.7	1.3	2.3	0.0	0.0	0.0	3.2	5.3	1.0
6	Bauri	72.7	70.3	75.7	24.1	25.8	22.0	1.5	1.7	1.1	1.7	2.2	1.1
7	Khiriya	84.5	81.9	87.4	13.0	13.8	12.0	0.3	0.5	0.0	2.3	3.7	0.6
8	Ganeshganj	49.5	59.2	31.0	41.6	29.8	64.0	1.7	1.6	2.0	7.2	9.4	3.0
9	Manikpura	45.4	53.0	35.8	36.9	24.7	52.0	0.3	0.5	0.0	17.5	21.9	12.1
<b>CONTROL VILLAGE</b>													
10	Neemkhera	39.1	40.0	38.2	45.3	37.4	53.6	1.3	1.7	0.9	14.2	20.9	7.3

Source – Census 2001

9.33 Agriculture remains to be the main occupation of the ten villages identified for the study. The proportion of cultivators to the total workers ranged between 36.8 percent for village Minnora [adopted village] to 95.1 percent for village Papawani [cluster village]. **Usually these percentages are also fairly high among adopted and cluster villages that justify the selection of such villages in the group of adopted and cluster.** Out of ten villages, in five number of villages viz. Surajpur, Charpuan, Papawani, Bauri and Khiriya, the proportion of female cultivators is more than that of male cultivators [in case of village Surajpur cent percent females are cultivators] that signifies the awareness and intent of the female members of the farming community to work along with their male counterpart for addition in household income. The trend matches with the modern expectations of equality of gender participation in work that, besides, income augmentation, ensures women empowerment to a great extent. Another significant fact revealed by the above table is that in general the proportion of cultivators is more than that of agriculture labour which is a sure indication that in these villages the occupation of agriculture is being pursued fairly satisfactorily.

9.34 Regarding proportion of agriculture labour to total workers, that ranged between 1.7 percent for village Papawani [cluster village] to 53.2 percent for village Sujanpura [cluster village], the involvement of female participation in general is more than that of males that indicates the performance of odd jobs regarding farming by women folk of our sample area.

9.35 The situation regarding proportion of workers in household industries to total workers is far from being satisfactory as it ranged between 0.3 percent for villages Khiriya and Manikpura [both cluster village] to 1.7 percent for village Bauri [cluster village]. In villages like Minnora, Sujanpura, Papawani and Manikpura such secondary sector activities are totality missing. Usually in Madhya Preadesh the status of secondary sector occupation in villages is poor. One of the important factors of rural poverty is absence of such occupations that encourage migration during lean season of agriculture. Such sort of secondary occupation may be encouraged through proper implementation of various welfare schemes, particularly relating to rural development, being run by the government.

9.36 In all the identified ten number of villages, the proportion of other workers to total workers is far below than the proportion of cultivators and agriculture labour to total workers with more participation of males as compared to females.

## LAND USE DETAILS

9.37 The table below shows the land use details of the identified ten villages covered under the study;

Table No. 9.11  
Land Use Details

Sl. No.	Name of the Village	Total geographical area	Gross cropped area	Forest	Not available for cultivation	Cultivable waste	Irrigation				Total irrigated area	Unirrigated
							Canal	Pond	Wells /tube wells	Others		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Surajpur	179	164 [91.62]	-	15	10	68	-	27	24	119 [72.56]	35
2	Minnora	408	305 [74.75]	-	103	33	-	-	79	113	192 [62.95]	80
3	Charpua	521	437 [83.88]	-	84	56	157	-	10	90	257 [58.81]	124
<b>Adopted Village I</b>		1108	906 [81.77]	-	202	99	225	-	116	227	568 [62.69]	239
4	Sujanpura	231	183 [79.22]	-	48	1	-	-	35	4	39 [21.31]	143
5	Papawani	507	453 [89.35]	-	54	118	43	-	173	-	216 [47.68]	119
6	Bori	172	157 [91.28]	-	15	21	-	-	116	-	116 [73.89]	20
7	Khiriya	316	269 [85.13]	-	47	16	200	-	33	-	233 [86.62]	20
8	Ganesh Ganj	431	376 [87.24]	-	55	37	172	-	81	60	313 [83.24]	26
9	Manikpura	280	238 [85.00]	-	42	43	129	-	22	32	183 [76.89]	12
<b>Cluster Village II</b>		1937	1676 [86.53]	-	261	236	544	-	460	96	1100[65.63]	340
10	Neemkhera	257	206 [80.16]	-	54	25	-	-	76	46	122 [59.22]	59
<b>Control Village III</b>		257	206 [80.16]	-	54	25	-	-	76	46	122 [59.22]	59
<b>Total – I+II+III</b>		3302	2788 [84.43]	-	517	360	769	-	652	369	1790 [64.20]	638

Source – Census, 2001

Note – Col. – 4 = Figures in brackets show percentage to total geographical area.

Col. – 12 = Figures in brackets show percentage to gross cropped area.

9.38 The gross cropped area of the identified ten villages is 2788 hectares which is 84.43 percent to total geographical area. The survey area is having no forest area which is somewhat out of ordinary.

9.39 Regarding irrigation, the percentage of gross irrigated area to gross cropped area is 64.20 which is much above the district average of 53.56 percent and state average of 28.54 percent. In adopted villages, cluster and control villages these percentages are 62.69, 65.63 and 59.22 respectively.

9.40 Cultivable waste land, that gives promise for expanding agriculture activities is 360 hectares which is 10.90 percent to total geographical area, assures the fact that through the intervention of K.V.K. the expansion of agriculture is possible.

## RURAL ELECTRIFICATION

9.41 Rural electrification is one of the important parameters for agricultural development, particularly in the context of energisation of pump sets. The table below shows the details;

Table No. 9.12  
Status of Rural Electrification

Sr. No.	Name of the village	Village Electrified		Regular supply		If irregular actual hrs. of supply
		Yes	No	Yes	No	
1	2	3	4	5	6	7
1.	Surajpur	1			1	8
2.	Minnora	1			1	10
3.	Charpua	1			1	10
	<b>Adopted Village</b>	3			3	
4.	Sujanpura	1			1	12
5.	Papawani	1			1	12
6.	Bori	1			1	12
7.	Khiriya	1			1	12
8.	Ganesh Ganj	1			1	12
9.	Manikpura	1			1	12
	<b>Cluster Village</b>	6			6	
10	Neemkhera	1			1	12
	<b>Control Village</b>	1			1	
	<b>Total</b>	10			10	

\*The information in brackets shows the name of the Development Block where the village is located. This information will be common to all the subsequent tables.

9.42 All the villages covered under the study are electrified with irregular power supply situations. The power supply for most of the villages remained to be 12 hrs per day.

9.43 Energisation of pump sets is the direct impact of rural electrification over agriculture development. The table below shows the extent of energisation of pump sets in our sample area of study;

Table No. 9.13  
Status of Pump Sets Energised

Sr. No.	Name of the village	Pump sets energized	
		Electricity (No.)	Diesel (No.)
1	2	3	4
1.	Surajpur	30	5
2.	Minnora	30	6
3.	Charpua	40	15
	<b>Adopted Village</b>	100	26
4.	Sujanpura	8	2
5.	Papawani	80	10
6.	Bori	25	2
7.	Khiriya	25	5
8.	Ganesh Ganj	100	3
9.	Manikpura	10	0
	<b>Cluster Village</b>	248	22
10	Neemkhera	10	4
	<b>Control Village</b>	10	4
	<b>Total</b>	358	52

- 9.44 The total number of pump sets energized is 410 which is 1.42 percent to total number of 28920 pump sets energized in district Tikamgarh in the year 1999-2000. It may be mentioned here that for district Tikamgarh the number of energized pump sets per thousand hectare of gross cropped area is 71 as against the State average of 60 that shows a fair nature of agriculture in the district. **In general, the number of pump sets energized is more in adopted and cluster group of villages as compared to control village which rather, is obvious as these villages have direct intervention of K.V.K. regarding technology transfer for better cultivation practices.** Electricity energized number of pump sets are much more than that of pump sets energized by use of diesel that ranged between 8 numbers in village Sujanpura to 100 numbers in village Ganeshganj.

## HOUSEHOLD INDUSTRIAL UNITS

- 9.45 **The existence of only one rural industrial unit in village Papawani [cluster village] is not very peculiar as such units are generally not found in rural areas of Madhya Pradesh which is one of the important contributory factors of rural poverty.**

## COOPERATIVES

- 9.46 Only five number of cooperative societies in the break-up of Agriculture Cooperative Credit Societies [2 numbers], Fisherman Cooperative Society [1 number] and Milk Cooperative Societies [2 numbers] exist in our sample area of study which seems a fair number as compared to other villages covered under the study where either such societies are not in existence or the number is very marginal.
- 9.47 The existence of various basic and infrastructural facilities is important from the angel of absorption capacity of technology of any sort in identified areas to gurantee future chain of development. In the subsequent paragraphs an attempt has been made to present such inventories for sample villages covered under the study.

## BASIC FACILITIES

- 9.48 The table below shows the details;

Table No. 9.14  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	District head quarter away from the village KM	Tahsil head- quarter		Block head quarter	
			Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	3	4	5	6	7
1.	Surajpur	13		13		13
2.	Minnora	7		7		7
3.	Charpua	10		10		11
	<b>Adopted Village</b>					
4.	Sujanpura	8		8		8
5.	Papawani	8		8		8
6.	Bori	6		6		6
7.	Khiriya	15		15		15
8.	Ganesh Ganj	6		6		7
9.	Manikpura	5		5		5
	<b>Cluster Village</b>					
10	Neemkhera	9		9		9
	<b>Control Village</b>					
	<b>Total</b>	10		10		10

Table No. 9.14 [Contd...]  
Status of Basic Administrative Facilities

Sr. No.	Name of the village	Gram Panchayat		Police Station/sub station	
		Within the village 0 KM	Away from the village Km	Within the village 0 KM	Away from the village Km
1	2	8	9	10	11
1.	Surajpur		2		2
2.	Minnora	0			7
3.	Charpua	0			6
	<b>Adopted Village</b>				
4.	Sujanpura		1		6
5.	Papawani	0			5
6.	Bori	0			5
7.	Khiriya	0		0	
8.	Ganesh Ganj	0			5
9.	Manikpura		2		6
	<b>Cluster Village</b>				
10	Neemkhera		2		6
	<b>Control Village</b>				
	<b>Total</b>	6	4	1	9

9.49 The above table shows the location of district, tahsil and block headquarters quite far away from most of the sample villages. The location of Gram Panchayat within or close to the sample villages is a positive factor that, to some extent, guarantees involvement of villagers in the development of their area. Though in non of the villages police stations are located within the geographical area of the village but within a manageable distance.

#### INFRASTRUCTURAL FACILITIES - ROADS

9.50 For the socio-economic development of any area the role of availability of proper road network is very important. The table below shows the status of availability of road network in and around the identified ten villages;

Table No. 9.15  
Road Infrastructure

Sr. No.	Name of the village	Fair weather road		Kharanja road within the village 0 km
		Within the village 0 Km	Away from the village Km	
1	2	3	4	5
1.	Surajpur		4	0
2.	Minnora		2	0
3.	Charpua	0	2	0
	<b>Adopted Village</b>			
4.	Sujanpura		8	0
5.	Papawani		12	0
6.	Bori	0		0
7.	Khiriya		16	0
8.	Ganesh Ganj		15	0
9.	Manikpura		17	0
	<b>Cluster Village</b>			
10	Neemkhera		19	0
	<b>Control Village</b>			
	<b>Total</b>	2	8	10



Table No. 9.15 [Contd...]

## Road Infrastructure

Sr. No.	Name of the village	Link road to all weather road		All weather road	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	6	7	8	9
1.	Surajpur	0		0	
2.	Minnora		4	0	
3.	Charpua	0		0	
	<b>Adopted Village</b>				
4.	Sujanpura	0		0	
5.	Papawani		7	0	
6.	Bori		2		2
7.	Khiriya	0		0	
8.	Ganesh Ganj	0		0	
9.	Manikpura	0		0	
	<b>Cluster Village</b>				
10	Neemkhera	0		0	
	<b>Control Village</b>				
	<b>Total</b>	7	3	9	1

- 9.51 Information contained in the above table reveals a **satisfactory situation as in 2 number of villages fair weather roads exist. Kharanja roads are available within all the sample villages that ensure convenient transport in rainy season within the villages with reasonable clean sanitary conditions. The existence of link roads in seven villages alongwith the availability of all weather roads passing through 9 number of sample villages is a definite advantage that ensures the development of area to greater extent.**

Infrastructural Facilities - Railway Station, Bus Stand/Bus Stop/  
Post Office/S.T.D. Booth

- 9.52 The table shows the details;

Table No. 9.16

## Facilities Regarding Railway Station/Bus Stand/Bus Stop/Post Office/STD Booths

Sr. No.	Name of the village	Railway station		Bus stand/Bus stop	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6
1.	Surajpur		48	0	
2.	Minnora		52	0	
3.	Charpua		50	0	
	<b>Adopted Village</b>				
4.	Sujanpura		50	0	
5.	Papawani		60	0	
6.	Bori		62		2
7.	Khiriya		44	0	
8.	Ganesh Ganj		55	0	
9.	Manikpura		60		1
	<b>Cluster Village</b>				
10	Neemkhera		50		1
	<b>Control Village</b>				
	<b>Total</b>		10	7	3

Table No. 9.16 [Contd...]  
Facilities Regarding Railway Station/Bus Stand/Bus Stop/Post Office/STD Booths

Sr. No.	Name of the village	Post office		STD booth	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	7	8	9	10
1.	Surajpur		2		2
2.	Minnora		1		1
3.	Charpua		5	0	
	<b>Adopted Village</b>				
4.	Sujanpura		4		1
5.	Papoura (Mondu Bhak)	0		0	
6.	Bori		2		2
7.	Khiriya	0		0	
8.	Ganesh Ganj		3		3
9.	Manikpura		2		3
	<b>Cluster Village</b>				
10	Neemkhera		4		2
	<b>Control Village</b>				
	<b>Total</b>	2	8	3	7

9.53 For all the ten sample villages the **railway station** is located away from the village that ranged between 44 kms for village Khiriya [cluster village] to 62 kms for village Bori [cluster village]. Regarding bus stand/bus stop, seven number of villages have this facility within the geographical limit of the village while for 3 villages the facility is located within a easy distance. Even two villages have post office within the village while rest of the villages have this facility within managable limits. Strange enough, even 3 villages have S.T.D. facilities within the village while seven villages have this facility within a short distance. Thus, even communication wise the villages are quite advanced.

**Infrastructural Facilities - Agriculture Marketing, Fair Price Shop, Cold Storage**

9.54 Mandi or Sub Mandi being regulated markets are important destinations for fair transaction of agriculture produce. The cold storage is yet another important asset that helps in avoiding distress selling. The table below shows the details;

Table No. 9.17  
Agriculture Marketing, Fair Price Shop, Cold Storage

Sr. No	Name of the village	Regular market		Weekly market		Mandi	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Surajpur		11		11		13
2.	Minnora		7		7		7
3.	Charpua		9		9		9
	<b>Adopted Village</b>						
4.	Sujanpura		8		8		8
5.	Papawani		5		5		5
6.	Bori		5		5		6
7.	Khiriya		6		6		15
8.	Ganesh Ganj		5		5		6
9.	Manikpura		5		5		5
	<b>Cluster Village</b>						
10	Neemkhera		9		9		9
	<b>Control Village</b>						
	<b>Total</b>		10		10		10

Table No. 9.17 [Contd...]  
Agriculture Marketing, Fair Price Shop, Cold Storage

Sr. No.	Name of the village	Sub-Mandi		Fair Price Shop		Cold Storage	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12	13	14
1.	Surajpur		13	0			11
2.	Minnora		7	0			8
3.	Charpua		9	0			10
	<b>Adopted Village</b>						
4.	Sujanpura		8		1		8
5.	Papawani		5	0			6
6.	Bori		6	0			7
7.	Khiriya		15	0			15
8.	Ganesh Ganj		6	0			6
9.	Manikpura		5		2		4
	<b>Cluster Village</b>						
10	Neemkhera		9		2		9
	<b>Control Village</b>						
	<b>Total</b>		10	7	3		10

9.55 In non of the ten identified villages the facilities like regular market, weekly market, mandi and sub-mandi exist though such facilities are located within managable distance in rural context. The availability of fair price shops in 7 number of villages is encoraging. The cold storage facilities are located away from the villages, which, seem natural.

#### AGRO BASED INDUSTRIAL UNITS

9.56 The table below shows the details;

Table No. 9.18  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Flour mill		Oil mill		Dal mill	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	3	4	5	6	7	8
1.	Surajpur	0			5		13
2.	Minnora	0			1		7
3.	Charpua	0			3		10
	<b>Adopted Village</b>						
4.	Sujanpura		2		8		9
5.	Papawani	0			5		5
6.	Bori	0			5		6
7.	Khiriya	0			6		15
8.	Ganesh Ganj	0			5		6
9.	Manikpura	0			5		5
	<b>Cluster Village</b>						
10	Neemkhera	0			8		9
	<b>Control Village</b>						
	<b>Total</b>	9	1		10		10

Table No. 9.18 [Contd...]  
Status of Agro Based Industrial Units

Sr. No.	Name of the village	Saw mill		Repair of Agr. implements	
		Within the village 0 Km	Away from the village Km	Within the village 0 Km	Away from the village Km
1	2	9	10	11	12
1.	Surajpur		13		5
2.	Minnora		7		1
3.	Charpua		10		3
	<b>Adopted Village</b>				
4.	Sujanpura		9		2
5.	Papawani		6		6
6.	Bori		6		5
7.	Khiriya		15		6
8.	Ganesh Ganj		5		3
9.	Manikpura		5		5
	<b>Cluster Village</b>				
10	Neemkhera		9	0	
	<b>Control Village</b>				
	<b>Total</b>		10	1	9

9.57 The above table shows that out of 10 number of villages, **flour mills** are located within the physical boundaries of 9 number of villages while in rest of 1 village this facility is located within the easy reach of the villagers. In non of the villages, oil mills, dal mills and saw mills are located within the easy reach of the villagers [except in few marginal cases where the distance is not much]. With the exception of village Neemkhera non-existence of any unit of repair of agricultural implements in rest of the villages is a drawback as the inhabitants of these villages are pursuing agriculture as main occupation.

## SOCIAL INPUTS – EDUCATION

### ELEMENTARY EDUCATION – PRIMARY LEVEL

9.58 The Universalisation of Elementary Education Programme [U.E.E.] which envisages compulsory enrolment of children upto the age of 14 years of age has become popular in Madhya Pradesh. The table below shows the details of primary level of education in our area of study.

Table No. 9.19  
Status of Primary Level of Education

Sr. No.	Name of the village	Primary School					Non formal education	
		Within the village 0 km	With-in 1 km	With-in 2 km	With-in 3 km	> 3 km	Within the village 0 km	Away from the village km
1.	Surajpur	0						5
2.	Minnora	0						8
3.	Charpua	0						6
	<b>Adopted Village</b>							
4.	Sujanpura	0						8
5.	Papawani	0						4
6.	Bori	0						7
7.	Khiriya	0						12
8.	Ganesh Ganj	0						11
9.	Manikpura	0						5
	<b>Cluster Village</b>							
10	Neemkhera	0						10
	<b>Control Village</b>							
	<b>Total</b>	10	0	0	0	0	0	10

**9.59 One positive fact revealed by the above table is the existence of primary schools within the geographical limits of all the ten number of villages covered under the study that contributed for higher levels of literacy rate within the sample area.** Non formal education centres meant for working children who can not attend the regular primary institutions are not existing within the sample villages.

### **ELEMENTARY EDUCATION–MIDDLE LEVEL AND ADULT EDUCATION**

9.60 The table below shows the status of middle level and adult education.

Table No. 9.20  
Status of Middle Level and Adult Education

Sr. No.	Name of the village	Middle School			Adult Education			
		In the village 0 km	Within 5 km	More than 5 km	Within 1 km	Within 2 km	Within 3 km	> 3 km
1	2	3	4	5	6	7	8	9
1.	Surajpur		2					10
2.	Minnora		1					9
3.	Charpua	0						15
	<b>Adopted Village</b>							
4.	Sujanpura		2					8
5.	Papawani	0						11
6.	Bori	0						8
7.	Khiriya	0						15
8.	Ganesh Ganj	0						10
9.	Manikpura	0						5
	<b>Cluster Village</b>							
10	Neemkhera		1					15
	<b>Control Village</b>							
	<b>Total</b>	6	4					10

9.61 The above table shows the location of middle school within the geographical limits of 6 number of village, Since the criterion of the accessibility of middle school is 3 kms, the rest of 4 number of villages are therefore within the laid down criterion which is an encouraging picture. For every village the facility of adult educations centres are generally located for away from the village.

### **SECONDARY LEVEL OF EDUCATION**

9.62 The policy relating to secondary education implies extension of school system in unserved areas, consolidating existing facilities and providing special arrangements for talented students. In view of above policy decisions, the table below shows the details;

Table No. 9.21  
Status of Secondary Level Education

Sr. No.	Name of the village	High School			Higher School (+2)		
		In the village 0 km	Within 5 km	More than 5 km	In the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Surajpur			7			12
2.	Minnora		1				7
3.	Charpua		3				9
	<b>Adopted Village</b>						
4.	Sujanpura		2				8
5.	Papawani		5			5	
6.	Bori		5			5	
7.	Khiriya			9			15
8.	Ganesh Ganj		3			5	
9.	Manikpura		3			3	
	<b>Cluster Village</b>						
10	Neemkhera		2				9
	<b>Control Village</b>						
	<b>Total</b>		8	2		4	6

9.63 The above table shows the existence of high school and higher school with 5 km radius for 8 villages and 4 village respectively. For rest of the villages these facilities are located far-away from the geographical limits of the identified sample villages. However, the situation is highly satisfactory.

#### COLLEGIATE AND TECHNICAL EDUCATION

9.64 The table below shows the details

Table No. 9.22  
Status of Collegiate and Technical Education

Sr. No	Name of the village	College			Industrial Training Instt.		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Surajpur			10			12
2.	Minnora			7			9
3.	Charpua			10			10
	<b>Adopted Village</b>						
4.	Sujanpura			9			9
5.	Papawani			7			7
6.	Bori		5				6
7.	Khiriya			14			14
8.	Ganesh Ganj		4				7
9.	Manikpura		3				7
	<b>Cluster Village</b>						
10	Neemkhera			8			9
	<b>Control Village</b>						
	<b>Total</b>		3	7			10

9.65 The above table shows that in non of the villages these facilities are located within the physical limits of ten sample villages which seem obvious as colleges and I.T.Is. are usuall located at district or tahsil headquarters.

## HEALTH

9.66 Primary health care approach being the core strategy of the Tenth Plan for Madhya Pradesh, a multi tier health and family welfare service delivery system has been developed in the State consisting of sub-health centres, primary health centres and community health centres. Besides, civil hospitals, district hospitals and other special health care institutions have been provided as a support to three tier system. The norms accepted for three tier system is given below;

- a. Sub Health Centre for every 5,000 population in non-tribal areas and 3,000 population in tribal.
- b. Primary Health Centre for every 30,000 population in non-tribal areas and 20,000 population in tribal areas.
- c. Community Health Centre for 1,20,000 population in non-tribal areas and 80,000 population in tribal areas.

9.67 On the basis of aforesaid population criteria, the locational analysis of sub-health centres and Rural Family Welfare Centres may be attempted.

9.68 The table below shows the details;

Table No. 9.23  
Rural Health Infrastructure

Sr. No.	Name of the village	Sub Health Centre			Rural Family Welfare Centre		
		Within the Village 0 km	Within 5 km	More than 5 km	Within the Village 0 km	Within 5 km	More than 5 km
1	2	3	4	5	6	7	8
1.	Surajpur		2			3	
2.	Minnora		1			1	
3.	Charpua		3			3	
	<b>Adopted Village</b>						
4.	Sujanpura		2			2	
5.	Papawani		5			5	
6.	Bori		2			2	
7.	Khiriya	0			0		
8.	Ganesh Ganj		3			3	
9.	Manikpura		3			3	
	<b>Cluster Village</b>						
10	Neemkhera		2			2	
	<b>Control Village</b>						
	<b>Total</b>	1	9		1	9	

Table No. 9.23 [Contd...]  
Rural Health Infrastructure

Sr. No.	Name of the village	Government Hospital			Government Dispensary		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	9	10	11	12	13	14
1.	Surajpur			8			10
2.	Minnora			7		1	
3.	Charpua			9		3	
	<b>Adopted Village</b>						
4.	Sujanpura			8		3	
5.	Papawani		5			5	
6.	Bori			6		5	
7.	Khiriya			15			9
8.	Ganesh Ganj			6		3	
9.	Manikpura			6		5	
	<b>Cluster Village</b>						
10	Neemkhera			9		2	
	<b>Control Village</b>						
	<b>Total</b>		1	9		8	2

Table No. 9.23 [Contd...]  
Rural Health Infrastructure

Sr. No	Name of the village	Private Clinic			Nursing Home		
		Within the village 0 km	Within 5 km	More than 5 km	Within the village 0 km	Within 5 km	More than 5 km
1	2	15	16	17	18	19	20
1.	Surajpur		3				12
2.	Minnora		1				8
3.	Charpua		3				9
	<b>Adopted Village</b>						
4.	Sujanpura		2				8
5.	Papawani	0					6
6.	Bori		5				7
7.	Khiriya	0					15
8.	Ganesh Ganj		3				7
9.	Manikpura		5			5	
	<b>Cluster Village</b>						
10	Neemkhera		2				9
	<b>Control Village</b>						
	<b>Total</b>	2	8			1	9

- 9.69 Against the total number of 10 villages only one village i.e. Khiriya [cluster village] has sub health centre within the geographical limits of the village. In rest of the 9 villages, the sub health centre is located within 5 km distance from the village which obviously is an encouraging situation.
- 9.70 Regarding Rural Family Welfare Centre, in village Khiriya this facility is located within the village. In rest of the villages, this facility is located within 5 km distance from the village.
- 9.71 As regards government hospitals, the facility is not available within the geographical limits of any of the sample village while in 1 number of village this facility is available within 5 km radius of the village and for 9 number of villages, government hospitals are located more than 5 kms away from the village. More or less similar is the situation with government dispensaries.



9.72 In two villages the private clinic are located within the geographical limits of the village while in non of the villages nursing homes are in existence.

## FAMILY WELFARE

9.73 Limiting the size of the family is the most important parameter of family welfare measures. The table below shows the status of the acceptors of family welfare measures in the sample villages covered under the study.

Table No. 9.24  
Status of Acceptors of Family Welfare Measurer

Sr. No	Name of the village	Total Workers	Acceptors of Nirodh (No. of Benefic-iar-ies)	Tubectomy (No. of Benefic-iar-ies)	Vasectomy (No. of Benefic-iar-ies)	Loop Insertion (No. of Benefic-iar-ies)	Oral Pills (No. of Benefic-iar-ies)	Traditional Methods (No. of Benefic-iar-ies)
1	2	3	4	5	6	7	8	9
1.	Surajpur	106	3 [2.83]	9 [8.49]	0	0	5 [4.72]	0
2.	Minnora	408	3 [0.74]	7 [1.72]	2 [0.49]	0	3 [0.74]	0
3.	Charpua	451	10 [2.22]	18 [3.99]	4 [0.89]	6 [1.33]	12 [2.66]	2 [0.44]
	<b>Adopted Village</b>	965	16 [1.66]	34 [3.52]	6 [0.62]	6 [0.62]	20 [2.07]	2 [0.21]
4.	Sujanpura	47	3 [6.38]	2 [4.26]	0	1 [2.13]	3 [6.38]	0
5.	Papawani	630	5 [0.79]	7 [1.11]	0	0	6 [0.95]	1 [0.16]
6.	Bori	406	5 [1.23]	11 [2.71]	3 [0.74]	1 [0.25]	6 [1.48]	1 [0.25]
7.	Khiriya	355	11 [3.10]	4 [1.13]	2 [0.56]	3 [0.85]	3 [0.85]	2 [0.56]
8.	Ganesh Ganj	291	10 [3.44]	6 [2.06]	2 [0.69]	4 [1.37]	4 [1.37]	3 [1.03]
9.	Manikpura	388	11 [2.84]	12 [3.09]	3 [0.77]	1 [0.26]	10 [2.58]	0
	<b>Cluster Village</b>	2117	45 [2.13]	42 [1.98]	10 [0.47]	10 [0.47]	32 [1.51]	7 [0.33]
10	Neemkhera	225	7 [3.11]	4 [1.78]	2 [0.89]	4 [1.78]	5 [2.22]	0
	<b>Control Village</b>	225	7 [3.11]	4 [1.78]	2 [0.89]	4 [1.78]	5 [2.22]	0
	<b>Total</b>	3307	68 [2.06]	80 [2.42]	18 [0.54]	20 [0.60]	57 [1.72]	9 [0.27]

*Note : Figures in brackets show the percentage to figures of column 3 laterally.*

9.74 In the above table the percentage figures have been arrived at on the basis of the figures of the workforce which is, in strict sense is not correct. The comparison should have been made on the basis of the figures of eligible couples. Since village wise such figures are not available, therefore as a second option the work force figures that usually include persons within the age group of 15 to 59 years have been taken who may be considered as population with reproductive capacity, particularly males.

9.75 Against the total figure of 3307 persons in the work force the total number of persons adopting various methods of family welfare is 252 which is 7.62 percent to total work force of ten identified villages. The performance to some extent is satisfactory as the figure would have gone to much higher level had the comparison made with the figures of eligible couple. As has been expected, the emphasis is more on the methods of tubectomy, acceptors of Nirodh and oral pills than on any other methods.

## DRINKING WATER

9.76 The table below shows the existing level of drinking water facilities available in the sample villages.

Table No. 9.25  
Status of Drinking Water Facilities

Sl. No.	Name of the Village	Sources of drinking water				
		In the village	Distance from the village			
			=1 KM	=2 KMS.	=3 KMS.	=4KMS.
1	2	3	4	5	6	7
	Surajpur					
1	Minnora	0	-	-	-	-
2	Charpua	0	-	-	-	-
3	<b>Adopted Village</b>	0	-	-	-	-
	Sujanpura					
4	Papawani	0	-	-	-	-
5	Bori	0	-	-	-	-
6	Khiriya	0	-	-	-	-
7	Ganesh Ganj	0	-	-	-	-
8	Manikpura	0	-	-	-	-
9	<b>Cluster Village</b>	0	-	-	-	-
	Neemkhera					
10	<b>Control Village</b>	0	-	-	-	-
	<b>Total</b>	10	-	-	-	-

9.77 In all the 10 number of sample villages one or other drinking water source, mostly hand pumps is available.

9.78 **In what follows an attempt has been made to summarise the details of the village particulars.**

- **The basic purpose of the collection of information about village facilities for identified ten villages is to ascertain the absorption capacity of any prevailing or new technology regarding any field what-so-ever.**
- **The total population of 10 identified villages is 7201 which is 0.73 percent of total rural population of Tikamgarh district.**
- **Basically all the ten identified villages are S.C. predominated where the percentage literacy ranged between 42.2 for village Manikpura to 65.7 percent for village Neemkhera, not far below the district level percentage literacy of 55.80 and state level figure of 64.11. The average size of the family is 6 persons.**
- **The work participation rate ranged between 26.6 percent for village Surajpur [adopted village] to 58.8 percent for village Sujanpura [cluster village].**
- **The proportion of main workers, in general is higher than marginal workers with male participation higher than female participation.**
- **A reverse situation is visible in case of marginal workers where female participation is more than male participation.**
- **The proportion of non-workers that ranged between 41.3 percent for village Sujanpura [adopted village] to 73.4 percent for village Surajpur [adopted village] presents a dismal picture.**
- **The agriculture remains to be the main occupation of the ten identified villages covered under the study with substantial proportion of cultivators as compared to agriculture labour. In five number of villages viz. Surajpur, Charpua, Papawani, Bauri and Khiriya the proportion of female cultivators is more than that of male cultivators that signifies the awareness and intent of the female members of the farming community to work along with their male counterpart.**
- **The situation regarding proportion of workers in household industries is far from being satisfactory as it ranged between 0.3 percent for villages Khiriya and Manikpura [both cluster villages] to 1.7 percent for village Bauri [cluster village].**

- Regarding land use, the gross cropped area of 10 number of identified villages is 84.43 percent to total geographical area. The percentage of gross irrigated area to gross cropped area is 64.20 much higher than district and state average percentages of 53.56 and 28.54 respectively.
- All the villages covered under the study are electrified with irregular power supply situation.
- The total number of pumpsets energized is 410 which is 1.42 percent of total number of 28920 pump sets energized in district Tikamgarh in the year 1999-2000.
- The existence of only one household industrial unit and five cooperative societies presents a discouraging picture.
- The location of Gram Panchayat within or close to the sample villages is a positive factor that, to some extent, guarantees involvement of villagers in the development of their area.
- The status of road infrastructure in identified 10 number of villages is highly satisfactory.
- The facility of railway station is not available within the close proximity of any of the village while seven number of villages have bus stand/bus stop within the village. Even two and three number of villages have post office and S.T.D. facility respectively within geographical limit of the district.
- In non of the ten identified villages any of agriculture marketing facilities exists.
- In non of the villages the oil mills, dal mills saw mills exist.
- Regarding education, the existence of primary school within the geographical limits of all the ten number of villages covered under the study is encouraging factor that contributed to higher levels of literacy rate.
- Regarding health scenario, village Khiriya [cluster village] has both sub health centre and rural family welfare centre within the geographical limit of the village. In two villages the private clinics are located within the geographical limit of the village.
- Against the total of 3307 persons in the work force the total number of persons adopting various methods of family welfare is 252 which is 7.62 percent to total work force of ten identified villages.
- In all the 10 number of sample villages one or other drinking water source, mostly hand pumps, is available.

## **Results of Survey**

## **- Household Particulars**

- 9.79 The present part of the chapter deals with the information relating to the households in the following dimensions;
- (i) Macro Dimensions – Wherein information from all the households residing in 10 number of sample villages has been collected.
  - (ii) Micro Dimensions – Wherein 25 percent of the households have been identified for the detailed enquiry.
- 9.80 In what follows an attempt has been made to detail out both macro and micro dimensions based on the information collected through House Listing Schedule and Household Schedule.

## **MACRO DIMENSIONS – GENERAL PARTICULARS**

- 9.81 The table below shows the details;

Table No. 9.26  
Household Details

S. No.	Name of the Village	No. of household as on the date of survey	Population Census-2001	Average size of the family (based on the figure of col.4
1	2	3	4	5
1.	Surajpur	77	398	5
2.	Minnora	95	923	9
3.	Charpua	146	940	6
	<b>Adopted Village</b>	318	2261	7
4.	Sujanpura	23	80	3
5.	Papawani	136	1215	8
6.	Bori	143	907	6
7.	Khiriya	86	719	8
8.	Ganesh Ganj	135	725	5
9.	Manikpura	140	864	6
	<b>Cluster Village</b>	663	4510	6
10	Neemkhera	39	430	11
	<b>Control Village</b>	39	430	11
	<b>Total</b>	1020	7201	7

9.82 The total number of households as per survey is 1020 for all the ten identified village. The average size of the family comes to 7 persons which is more than the average size of the family of 5 persons.

#### SOCIAL STATUS OF THE HOUSEHOLDS

9.83 The table below shows the social status of the households;

Table No. 9.27  
Social Status of the Households.

S. No.	Name of the Village	No. of Household	Caste (Social classification)				Interaction with KVK	
			S.T.	S.C.	O.B.C.	General	Yes	No
1	2	3	4	5	6	7	8	9
1.	Surajpur	77	14	14	48	1	24	53
2.	Minnora	95	10	41	34	10	21	74
3.	Charpua	146	1	83	38	24	75	71
	<b>Adopted Village</b>	318	25	138	120	35	120	198
4.	Sujanpura	23	0	22	0	1	9	14
5.	Papawani	136	5	67	50	14	42	94
6.	Bori	143	0	41	96	6	43	100
7.	Khiriya	86	4	48	19	15	23	63
8.	Ganesh Ganj	135	2	75	44	14	40	95
9.	Manikpura	140	4	21	102	13	36	104
	<b>Cluster Village</b>	663	15	274	311	63	193	470
10	Neemkhera	39	0	0	39	0	24	15
	<b>Control Village</b>	39	0	0	39	0	24	15
	<b>Total</b>	1020	40	412	470	98	337	683

9.84 The above table shows the prepondence of S.C. and O.B.C. households, the combined percentage of which is 86.47 to total number of 1020 households which underlines one important fact that the vulnerable communities in our sample villages are pursuing the agriculture occupation in viable manner. About 33 percent households have interacted with K.V.K. in one way or other.

### HOUSEHOLDS CLASSIFIED ON THE BASIS OF RELIGION

9.85 The table below shows the details;

Table No. 9.28  
Distribution of Households according to Religion

S. No.	Name of the Village	No. of Household	Hindu	Muslim	Sikh	Christian	Nu-Buddh
1	2	3	4	5	6	7	8
1.	Surajpur	77	77	0	0	0	0
2.	Minnora	95	95	0	0	0	0
3.	Charpua	146	146	0	0	0	0
	<b>Adopted Village</b>	318	318	0	0	0	0
4.	Sujanpura	23	23	0	0	0	0
5.	Papawani	136	136	0	0	0	0
6.	Bori	143	143	0	0	0	0
7.	Khiriya	86	86	0	0	0	0
8.	Ganesh Ganj	135	135	0	0	0	0
9.	Manikpura	140	140	0	0	0	0
	<b>Cluster Village</b>	663	663	0	0	0	0
10	Neemkhera	39	39	0	0	0	0
	<b>Control Village</b>	39	39	0	0	0	0
	<b>Total</b>	1020	1020	0	0	0	0

9.86 All the households in our area of study belong to Hindu religion.

### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – MAIN OCCUPATION PRIMARY SECTOR – AGRICULTURE

9.87 The table below shows the details;

Table No. 9.29  
Household According to their Main Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Surajpur	77	1	38	28	0
2.	Minnora	95	2	75	9	0
3.	Charpua	146	3	115	10	0
	<b>Adopted Village</b>	318	6	228	47	0
4.	Sujanpura	23	7	16	4	0
5.	Papawani	136	7	36	53	0
6.	Bori	143	32	42	40	5
7.	Khiriya	86	21	19	11	5
8.	Ganesh Ganj	135	84	15	27	3
9.	Manikpura	140	100	-	21	7
	<b>Cluster Village</b>	663	251	128	156	20
10	Neemkhera	39	8	4	12	10
	<b>Control Village</b>	39	8	4	12	10
	<b>Total</b>	1020	265	360	215	30

9.88 Out of the total number of 1020 households 870 number of households constituting 85.29 percent to total households are engaged directly in agriculture as their main occupation that clearly indicates the proper rationale of selection of villages in the groups of adopted and cluster. The combined percentage of other farmers and small farmers is 56.37 that justifies one fact clearly that the absorption capacity of new or prevailing technologies exists in our area of study which in due course will definitely cover the marginal farmers as well. Existence of only 30 number of households as agriculture labour is indicative of the fact that agriculture as main occupation is being pursued on viable manner.

#### PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

9.89 Activities allied to agriculture are equally important as additional source of income and employment in rural areas. The table below shows the details;

Table No. 9.30  
Households according to their Main Occupations – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Produce Collection	Livestock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Surajpur	77	0	1	0	0
2.	Minnora	95	0	0	0	0
3.	Charpua	146	0	0	0	0
	<b>Adopted Village</b>	318	0	1	0	0
4.	Sujanpura	23	0	0	0	0
5.	Papawani	136	0	0	0	0
6.	Bori	143	0	0	0	3
7.	Khiriya	86	0	1	0	0
8.	Ganesh Ganj	135	0	3	0	0
9.	Manikpura	140	0	0	0	3
	<b>Cluster Village</b>	663	0	4	0	6
10	Neemkhera	39	0	0	0	0
	<b>Control Village</b>	39	0	0	0	0
	<b>Total</b>	1020	0	5	0	6

9.90 The above table reveals that out of 1020 households 5 number of families are engaged in livestock activities as main occupation while 6 number of households are pursuing hunting as their main occupation. Among six number of districts covered under the study, only in district Tikamgarh such type of activities are in vogue which is a positive indication as part of the population of sample villages have inclination for activities allied to agriculture though having a small magnitude.

#### SECONDARY AND TERTIARY SECTORS

9.91 Secondary and tertiary sector occupations are important from view points of income augmentation and employment generation and absorption of work force in lean season of agriculture and also reducing pressure on land. The table below shows the details;

Table No. 9.31  
Household According to their main Occupation Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of households	Secondary Sector		Tertiary Sector	
			Servicing And Repairs	Construction Work	Govt. Service	Service in Private Sector
1	2	3	4	5	6	7
1.	Surajpur	77	0	6	2	0
2.	Minnora	95	0	0	0	0
3.	Charpua	146	0	14	13	0
	<b>Adopted Village</b>	318	0	20	15	0
4.	Sujanpura	23	0	0	0	0
5.	Papawani	136	0	0	0	0
6.	Bori	143	0	0	9	0
7.	Khiriya	86	0	7	7	0
8.	Ganesh Ganj	135	0	0	7	0
9.	Manikpura	140	0	3	6	0
	<b>Cluster Village</b>	663	0	10	29	0
10	Neemkhera	39	0	0	0	0
	<b>Control Village</b>	39	0	0	0	0
	<b>Total</b>	1020	0	30	44	0

9.92 Out of the total of 1020 households, 30 number of households [2.94 percent] are engaged in secondary sector relating to construction work while 44 households [2.19 percent] are in government employment.

## OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS – SUBSIDIARY OCCUPATIONS

### PRIMARY SECTOR – AGRICULTURE

9.93 Agriculture as subsidiary occupation is being pursued by 568 number of households in our area of study. The table below shows the details.

Table No. 9.32  
Household according to Subsidiary Occupation – Agriculture

S. No.	Name of the Village	No. of household	Marginal Farmers	Small Farmers	Other Farmers	Agriculture Labour
1	2	3	4	5	6	7
1.	Surajpur	77	3	8	0	3
2.	Minnora	95	4	8	0	3
3.	Charpua	146	26	31	0	19
	<b>Adopted Village</b>	318	33	6	0	25
4.	Sujanpura	23	5	15	0	7
5.	Papawani	136	26	15	0	19
6.	Bori	143	31	15	0	20
7.	Khiriya	86	37	28	0	11
8.	Ganesh Ganj	135	41	31	1	52
9.	Manikpura	140	47	35	3	19
	<b>Cluster Village</b>	663	187	130	4	128
10	Neemkhera	39	5	6	0	19
	<b>Control Village</b>	39	5	6	0	19
	<b>Total</b>	1020	225	167	4	172

9.94 Agriculture as subsidiary occupation is mainly pursued by marginal farmers and agriculture labourers the combined percentage of which is 38.93 to total number of 1020 households. The situation seems obvious as these category of cultivators who are prone to migration, do other jobs as well for sustenance alongwith agriculture.

## PRIMARY SECTOR – FOREST, LIVESTOCK, FISHERIES, HUNTING

9.95 The table below shows the details;

Table No. 9.33

### Households According to their Subsidiary Occupation – Forest, Livestock, Fisheries, Hunting

S. No.	Name of The Village	No. of Household	Minor Forest Produce Collection	Livestock Activities	Fishing Activities	Hunting Activities
1	2	3	4	5	6	7
1.	Surajpur	77	0	6	0	0
2.	Minnora	95	0	19	0	0
3.	Charpua	146	0	0	0	0
	<b>Adopted Village</b>	318	0	25	0	0
4.	Sujanpura	23	0	0	0	0
5.	Papawani	136	0	0	12	0
6.	Bori	143	0	5	0	0
7.	Khiriya	86	0	4	0	0
8.	Ganesh Ganj	135	0	2	0	0
9.	Manikpura	140	0	3	0	0
	<b>Cluster Village</b>	663	0	14	12	0
10	Neemkhera	39	0	13	0	0
	<b>Control Village</b>	39	0	13	0	0
	<b>Total</b>	1020	0	52	12	0

9.96 Livestock is a popular activity in all the ten number of sample villages which is evident from the fact that 5.01 percent households to total of 1029 households are engaged in this activity as a source of their subsidiary income. While 12 number of households [1.18 percent] are pursuing fishing activities as subsidiary occupation.

## SECONDARY AND TERTIARY SECTORS

9.97 The table below shows the details;

Table No. 9.34

### Households According to their Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of Household	Secondary Sector		Tertiary Sector	
			Servicing and Repairs	Construction Work	Govt. Service	Service in Private Sector
1	2	3	4	5	6	7
1.	Surajpur	77	0	0	0	0
2.	Minnora	95	0	0	3	0
3.	Charpua	146	0	1	2	0
	<b>Adopted Village</b>	318	0	1	5	0
4.	Sujanpura	23	0	0	0	0
5.	Papawani	136	0	1	0	0
6.	Bori	143	0	0	0	0
7.	Khiriya	86	0	0	2	1
8.	Ganesh Ganj	135	0	0	0	0
9.	Manikpura	140	0	0	1	0
	<b>Cluster Village</b>	663	0	1	3	1
10	Neemkhera	39	0	0	0	0
	<b>Control Village</b>	39	0	0	0	0
	<b>Total</b>	1020	0	2	8	1

9.98 Involvement of households in activities relating to secondary sector as subsidiary occupation is two in our area of study while only 9 households are engaged in tertiary sector mostly employed in government service.



**9.99 The only conclusion that can be drawn from the narrations in foregoing paragraphs is that agriculture is the main activity of the area under study which is being pursued on viable scale.**

#### **AVERAGE MONTHLY INCOME**

9.100 In any survey work the most difficult part is the collection of information regarding income and expenditure of the household with reasonable accuracy as the households are very cautious about parting with the facts. However, the information shows a trend that may be useful for supporting conclusions which have direct or indirect relations with levels of income of the households. The table below shows the details;

Table No. 9.35  
Average Monthly Income

S. No.	Name of the Village	No. of House hold	Blow Rs.500	Rs.5001 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	77	0	0	0	0	0	4	73
2.	Minnora	95	0	0	0	0	0	0	95
3.	Charpua	146	0	0	0	0	0	10	136
	<b>Adopted Village</b>	318	0	0	0	0	0	14	304
4.	Sujanpura	23	0	0	0	0	0	3	20
5.	Papawani	136	0	0	0	0	0	1	135
6.	Bori	143	0	0	0	0	0	5	138
7.	Khiriya	86	0	0	0	0	1	17	68
8.	Ganesh Ganj	135	0	0	0	0	0	3	132
9.	Manikpura	140	0	0	0	0	0	2	138
	<b>Cluster Village</b>	663	0	0	0	0	1	31	631
10	Neemkhera	39	0	0	0	0	0	0	39
	<b>Control Village</b>	39	0	0	0	0	0	0	39
	<b>Total</b>	1020	0	0	0	0	1	45	974

9.101 The viable nature of agriculture as main and subsidiary occupations is reflected by the fact that out of 1020 number of households the combined number of households within the income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001 and above per month is 1019 which is 99.90 percent to total households. In adopted villages this percentage is cent percent while in cluster villages it is 99.85 percent. Even in control village where there is no intervention of K.V.K. the percentage of households within the income range Rs. 901.00 to Rs. 1000.00 and Rs. 1001 and above per month is cent percent that shows overall affluence level of the area.

#### **AVERAGE MONTHLY EXPENDITURE**

9.102 The table below shows the details;

Table No. 9.36  
Average Monthly Expenditure

S. No.	Name of the Village	No. of Household	Blow Rs.500	Rs.501 to Rs.600	Rs.601 to Rs.700	Rs.701 to Rs.800	Rs.801 to Rs.900	Rs.901 to Rs.1000	Rs.1001 and Above
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	77	0	0	0	1	0	0	76
2.	Minnora	95	0	0	0	0	0	0	95
3.	Charpua	146	0	0	0	0	0	0	146
	<b>Adopted Village</b>	318	0	0	0	1	0	0	317
4.	Sujanpura	23	0	0	0	0	0	3	20
5.	Papawani	136	0	0	0	0	0	5	131
6.	Bori	143	0	0	0	0	0	10	133
7.	Khiriya	86	0	0	0	0	0	2	84
8.	Ganesh Ganj	135	0	0	0	0	0	6	129
9.	Manikpura	140	0	0	0	0	0	3	137
	<b>Cluster Village</b>	663	0	0	0	0	0	29	634
10	Neemkhera	39	0	0	0	0	0	0	39
	<b>Control Village</b>	39	0	0	0	0	0	0	39
	<b>Total</b>	1020	0	0	0	1	0	29	990

9.103 In line with income level, the percentage of households within the expenditure range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above per month to total households is 99.90 with the break-up of 99.69 percent for adopted villages and cent percent for cluster villages which further shows the affluence level of the area.

9.104 To **sum up** it may be mentioned that :-

- **The total number of households as per survey is 1020 with average size of family of 7 persons. All the households are the followers of Hindu religion.**
- **The combined percentage of S.C. and O.B.C. communities is 86.47 to total of 1020 households.**
- **Out of total of 1020 households, 870 number of households constituting 85.29 percent to total households are engaged directly in agriculture as their main occupation.**
- **Out of 1020 households 5 number of families are engaged in livestock activities as main occupation while six number of households are pursuing hunting as their main occupation which are encouraging deviations as in most of the districts covered under the study the pursuance of these occupations are either missing or highly marginal.**
- **The pursuance of secondary and tertiary sectors as main occupation is only marginal.**
- **Agriculture as subsidiary occupation is mainly pursued by marginal farmers and agriculture labourers, the combined percentage of which is 38.93 to total number of 1020 households.**
- **In livestock and fishing activities 5.01 and 1.18 percent households respectively are engaged as source of secondary occupation**
- **Out of 1020 number of households the combined percentage of households within the average monthly income range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above is 99.90 which shows, overall, affluence level of the area.**
- **Similar is the trend with level of expenditure where 99.90 percent households are within the average monthly expenditure range of Rs. 901.00 to Rs. 1000.00 and Rs. 1001.00 and above that further shows the affluence level of the area.**

## RESULTS OF THE SURVEY – MICRO DIMENSION

9.105 In this part of the Chapter 25 percent of the households have been identified for detailed enquiry which comes to 256 households. The 25% of 1020 households comes to 255 but we have taken the figure of 256 due to unavoidable demographic particulars.

9.106 The table below shows the details;

Table No. 9.37  
Male – Female Distribution

S. No.	Name of the Village	No. of Families Selected	No. of Family Members	Male Total	Age, Male						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Surajpur	20	111	63	20	17	8	7	6	3	2
2.	Minnora	24	136	69	15	20	11	6	8	5	4
3.	Charpua	37	202	106	17	38	18	13	10	8	2
	<b>Adopted Village</b>	81	449	238	52	75	37	26	24	16	8
4.	Sujanpura	6	29	21	12	3	3	1	2	0	0
5.	Papawani	34	186	98	34	23	11	14	8	6	2
6.	Bori	37	196	101	42	16	14	19	5	4	1
7.	Khiriya	21	119	66	11	20	12	11	5	3	4
8.	Ganesh Ganj	34	196	83	14	24	14	10	11	7	3
9.	Manikpura	33	191	105	19	44	5	19	9	3	6
	<b>Cluster Village</b>	165	917	474	132	130	59	74	40	23	16
10	Neemkhera	10	68	28	4	7	5	3	4	3	2
	<b>Control Village</b>	10	68	28	4	7	5	3	4	3	2
	<b>Total</b>	256	1434	740	188	212	101	103	68	42	26

Table No. 9.37 [Contd...]  
Male – Female Distribution

S. No.	Name Of The Village	No. of Families Selected	No. of Family Members	Female Total	Age, Female						
					0-10 Years	10-20 Years	20-30 Years	30-40 Years	40-50 Years	50-60 Years	60 Years and Above
1	2	3	4	5	6	7	8	9	10	11	12
1.	Surajpur	20	111	48	9	13	8	9	5	2	2
2.	Minnora	24	136	67	21	18	8	8	5	6	1
3.	Charpua	37	202	96	17	31	14	13	14	4	3
	<b>Adopted Village</b>	81	449	211	47	62	30	30	24	12	6
4.	Sujanpura	6	29	8	1	1	3	2	1	0	0
5.	Papawani	34	186	88	30	19	11	17	6	5	0
6.	Bori	37	196	95	41	12	16	17	6	2	1
7.	Khiriya	21	119	53	17	12	5	9	5	3	2
8.	Ganesh Ganj	34	196	113	27	42	16	11	9	5	3
9.	Manikpura	33	191	86	16	25	8	21	7	4	5
	<b>Cluster Village</b>	165	917	443	132	111	59	77	34	19	11
10	Neemkhera	10	68	40	9	18	3	3	5	1	1
	<b>Control Village</b>	10	68	40	9	18	3	3	5	1	1
	<b>Total</b>	256	1434	694	188	191	92	110	63	32	18

**9.107** The above table shows that out of the total number of 1434 number of persons from 256 households males constitute 51.60 percent while females constitute 48.40 percent. The number of males within the age group of 20 to 60 years which represents labour force is 314 which is 42.43 percent to total number of 740 males is indicative of a positive fact that more persons are available for any productive work. These percentages are 46.64 in adopted villages and 44.73 in cluster villages which underline one basic point that in case of rapid development of agriculture through application of technology by the K.V.Ks. the possibility of absorbing the existing labour force will arrest the tendency of migration during lean season of agriculture. In case of females this percentage is 43.39 with break ups of 48.34 percent for adopted villages and 45.15 percent for cluster villages [more or less in line with male population] that again shows the availability of female labour – force for pursuance of any activity for family income augmentation along with engaging themselves in agriculture with their male counterpart. The percentage of dependent persons comprising of population within the age group of 0 to 10 years and 60 years and above who do not usually contribute towards family income is 28.92 in case of males and 29.68 percent in case females, is within a fair limit particularly for males which, ofcourse, is again a positive indicator.

### EDUCATIONAL STATUS OF SAMPLE HOUSEHOLDS

9.108 Education and literacy are the twin prerequisites necessary for adoption of any sort of technology. The table below shows the educational status of sample households;

Table No. 9.38  
Educational Status

S. No.	Name of The Village	No. of Families Selected	No. of Family Members	Illiterate	Literate without going to school	Primary No.	Middle No.
1	2	3	4	5	6	7	8
1.	Surajpur	20	111	41	0	32	25
2.	Minnora	24	136	42	0	42	34
3.	Charpua	37	202	36	2	41	51
	<b>Adopted Village</b>	81	449	119	2	115	110
4.	Sujanpura	6	29	12	0	8	6
5.	Papawani	34	186	76	1	61	34
6.	Bori	37	196	78	1	65	34
7.	Khiriya	21	119	32	0	33	27
8.	Ganesh Ganj	34	196	27	5	51	46
9.	Manikpura	33	191	20	0	47	52
	<b>Cluster Village</b>	165	917	245	7	265	199
10	Neemkhera	10	68	11	0	18	21
	<b>Control Village</b>	10	68	11	0	18	21
	<b>Total</b>	256	1434	375	9	398	330

Table No. 9.38 [Contd...]

## Educational Status

S. No	Name of The Village	No. of Families Selected	No. of Family Members	High School No.	Higher School No.	Graduate No.	Post Graduate No.	Others
1	2	3	4	9	10	11	12	13
1.	Surajpur	20	111	9	3	1	0	0
2.	Minnora	24	136	14	3	1	0	0
3.	Charpua	37	202	54	17	1	0	0
	<b>Adopted Village</b>	81	449	77	23	3	0	0
4.	Sujanpura	6	29	1	0	1	1	0
5.	Papawani	34	186	10	4	0	0	0
6.	Bori	37	196	10	7	1	0	0
7.	Khiriya	21	119	16	7	3	1	0
8.	Ganesh Ganj	34	196	49	18	0	0	0
9.	Manikpura	33	191	61	11	0	0	0
	<b>Cluster Village</b>	165	917	147	47	5	2	0
10	Neemkhera	10	68	18	0	0	0	0
	<b>Control Village</b>	10	68	18	0	0	0	0
	<b>Total</b>	256	1434	242	70	8	2	0

9.109 The literacy percentage against the total of 1434 persons is 73.85 which is far above than the district average of 55.80 percent and the state average of 64.11 percent as per census 2001. The percentage of children in levels of elementary education [primary + middle levels] is 50.77 which shows the fair impact of the programme of universalisation of Elementary Education over our area of study. The extent of higher education is far from being impressive mainly because of the lack of higher educational facilities in our area of study. **However, an overall educational status that emerges justifies the extent of absorption capacity of the people of the sample area to adopt technology regarding agriculture, introduced particularly by the K.V.K.**

#### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS–MAIN OCCUPATION

9.110 Out of the total of 1434 household members of our sample area, 268 persons are engaged in various main occupations which constitute 18.69 percent to total household members. In what follow an attempt has been made to analyse the information pertaining to main occupations.

#### OCCUPATIONS RELATING TO AGRICULTURE

9.111 The table below shows the details;

Table No. 9.39  
Main Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1.	Surajpur	20	111	6	0	14	0
2.	Minnora	24	136	12	1	10	0
3.	Charpua	37	202	19	1	16	2
	<b>Adopted Village</b>	81	449	37	2	40	2
4.	Sujanpura	6	29	4	0	2	0
5.	Papawani	34	186	24	0	8	1
6.	Bori	37	196	25	0	12	0
7.	Khiriya	21	119	9	0	11	2
8.	Ganesh Ganj	34	196	13	4	15	0
9.	Manikpura	33	191	21	1	9	0
	<b>Cluster Village</b>	165	917	96	5	57	3
10	Neemkhera	10	68	0	0	10	0
	<b>Control Village</b>	10	68	0	0	10	0
	<b>Total</b>	256	1434	133	7	107	5

9.112 The bulk of farming community from sample population is constituted by small farmers and farmers which is 16.74 percent to total of 1434 family members. The marginal number of agriculture labour is a supportive factor.

#### OCCUPATIONS ALLIED TO AGRICULTURE

9.113 The table below shows the details;

Table No. 9.40  
Main Occupation – Allied to Agricultural

S. No.	Name of The Village	No. of families selected	No. of family members	Minor Forest Produce Collection	Live stock Activities	Fishing Activities	Hunting Activities	Mining and Quarrying
1	2	3	4	5	6	7	8	9
1.	Surajpur	20	111	0	0	0	0	0
2.	Minnora	24	136	0	3	0	0	0
3.	Charpua	37	202	0	0	0	0	0
	<b>Adopted Village</b>	81	449	0	3	0	0	0
4.	Sujanpura	6	29	0	0	0	0	0
5.	Papawani	34	186	0	0	0	0	0
6.	Bori	37	196	0	0	0	0	0
7.	Khiriya	21	119	0	0	0	0	0
8.	Ganesh Ganj	34	196	1	2	0	0	0
9.	Manikpura	33	191	0	0	0	0	0
	<b>Cluster Village</b>	165	917	1	2	0	0	0
10	Neemkhera	10	68	0	4	0	0	0
	<b>Control Village</b>	10	68	0	4	0	0	0
	<b>Total</b>	256	1434	1	9	0	0	0

9.114 One of the mandates of K.V.K. is to encourage the activities allied to agriculture particularly that of animal husbandry and fisheries as alternate sources of rural income with immense advantage of reducing pressure on land. The above table shows the pursuance by 9 persons the activity of livestock rearing, as main occupation is an encouraging trend as in case of other K.V.Ks. covered under the study, the performance for this activity is either missing or negligible.

## OCCUPATIONS RELATING TO SECONDARY AND TERTIARY SECTORS

9.115 The table below shows the details;

Table No. 9.41  
Main Occupation – Secondary and Tertiary Sectors

S. No	Name of The Village	No. of families selected	No. of family members	Secondary sector			Tertiary Sector		
				Manufac-turing of by- Product	Servicing and repairs	Const- ruction work	Govt. Service	Service in Pvt. Sector	Others
1.	Surajpur	20	111	0	0	0	0	0	0
2.	Minnora	24	136	0	1	0	0	0	0
3.	Charpua	37	202	0	3	0	0	0	0
	<b>Adopted Village</b>	81	449	0	4	0	0	0	0
4.	Sujanpura	6	29	0	0	0	0	0	0
5.	Papawani	34	186	0	0	0	0	0	0
6.	Bori	37	196	0	0	0	0	0	0
7.	Khiriya	21	119	0	1	0	0	0	0
8.	Ganesh Ganj	34	196	0	0	0	0	0	0
9.	Manikpura	33	191	0	1	0	0	0	0
	<b>Cluster Village</b>	165	917	0	2	0	0	0	0
10	Neemkhera	10	68	0	0	0	0	0	0
	<b>Control Village</b>	10	68	0	0	0	0	0	0
	<b>Total</b>	256	1434	0	6	0	0	0	0

9.116 The involvement of six numbers of family members in secondary sector particularly in servicing and repairs can hardly be termed as satisfactory. One of the important causes of rural poverty is the absence of secondary sector occupations in the rural areas.

### OCCUPATIONAL DISTRIBUTION OF HOUSEHOLDS IN SUBSIDIARY OCCUPATIONS

9.117 Out of total of 1434 persons, 23 persons are engaged in various subsidiary occupations that constitute 1.60 percent to total household members of our sample area. The picture is hardly of any use.

### SUBSIDIARY OCCUPATIONS – AGRICULTURE

9.118 The table below shows the details;

Table No. 9.42  
Subsidiary Occupation – Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Small Farmer	Marginal Farmer	Farmer	Agriculture Labour
1.	Surajpur	20	111	0	0	0	0
2.	Minnora	24	136	0	0	1	0
3.	Charpua	37	202	1	0	0	0
	<b>Adopted Village</b>	81	449	1	0	1	0
4.	Sujanpura	6	29	0	0	0	0
5.	Papawani	34	186	0	0	0	0
6.	Bori	37	196	0	0	0	0
7.	Khiriya	21	119	0	0	0	5
8.	Ganesh Ganj	34	196	1	0	0	2
9.	Manikpura	33	191	0	0	1	0
	<b>Cluster Village</b>	165	917	1	0	1	7
10	Neemkhera	10	68	0	0	0	0
	<b>Control Village</b>	10	68	0	0	0	0
	<b>Total</b>	256	1434	2	0	2	7

9.119 The above table shows the involvement of only 4 persons in agricultural occupations which is hardly a meaningful affair.

### SUBSIDIARY OCCUPATIONS – ALLIED TO AGRICULTURE

9.120 The table below shows the details;

Table No. 9.43  
Subsidiary Occupation – Allied to Agriculture

S. No.	Name of The Village	No. of families selected	No. of family members	Minor Forest Produce Collection	Live stock activities	Fishing Activities	Hunting Activities	Mining and Quarrying
1	2	3	4	5	6	7	8	9
1.	Surajpur	20	111	0	0	0	0	0
2.	Minnora	24	136	0	4	0	0	0
3.	Charpua	37	202	0	0	0	0	0
	<b>Adopted Village</b>	81	449	0	4	0	0	0
4.	Sujanpura	6	29	0	0	0	0	0
5.	Papawani	34	186	0	0	0	0	0
6.	Bori	37	196	0	5	0	0	0
7.	Khiriya	21	119	0	1	0	0	0
8.	Ganesh Ganj	34	196	0	0	0	0	0
9.	Manikpura	33	191	0	0	0	0	0
	<b>Cluster Village</b>	165	917	0	6	0	0	0
10	Neemkhera	10	68	0	0	0	0	0
	<b>Control Village</b>	10	68	0	0	0	0	0
	<b>Total</b>	256	1434	0	10	0	0	0

9.121 The above table shows the involvement of 10 persons for the occupation relating to livestock activities as subsidiary occupation which is 0.70 percent to total family members.

### SUBSIDIARY OCCUPATION – SECONDARY AND TERTIARY SECTORS

9.122 The table below shows the details;

Table No. 9.44  
Subsidiary Occupations – Secondary and Tertiary Sectors

S. No.	Name of The Village	No. of families selected	No. of family members	Manufacturing of by Product	Servi-cing and repairs	Const-ruction work	Govt. Service	Service in Pvt. Sector
1	2	3	4	5	6	7	8	9
1.	Surajpur	20	111	0	0	0	0	0
2.	Minnora	24	136	0	0	0	0	0
3.	Charpua	37	202	0	0	0	0	0
	<b>Adopted Village</b>	81	449	0	0	0	0	0
4.	Sujanpura	6	29	0	0	0	0	0
5.	Papawani	34	186	0	0	0	0	0
6.	Bori	37	196	0	0	0	0	0
7.	Khiriya	21	119	0	2	0	0	0
8.	Ganesh Ganj	34	196	0	0	0	0	0
9.	Manikpura	33	191	0	0	0	0	0
	<b>Cluster Village</b>	165	917	0	2	0	0	0
10	Neemkhera	10	68	0	0	0	0	0
	<b>Control Village</b>	10	68	0	0	0	0	0
	<b>Total</b>	256	1434	0	2	0	0	0

9.123 Again there are only two persons engaged in secondary sector which is far from being satisfactory.



## AVERAGE MONTHLY INCOME

9.124 The table below shows the details;

Table No. 9.45  
Average Monthly Income

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 & above
1	2	3	4	5	6	7	8	9	10	11
1.	Surajpur	20	111	20	0	0	0	0	0	91
2.	Minnora	24	136	27	0	0	0	0	1	108
3.	Charpua	37	202	36	0	0	2	0	3	161
	<b>Adopted Village</b>	81	449	83	0	0	2	0	4	360
4.	Sujanpura	6	29	6	0	0	0	0	0	23
5.	Papoura (Mondu Bhak)	34	186	34	0	0	0	0	1	151
6.	Bori	37	196	37	0	0	0	0	0	159
7.	Khiriya	21	119	20	0	0	0	0	1	98
8.	Ganesh Ganj	34	196	34	0	0	0	0	1	161
9.	Manikpura	33	191	34	0	0	0	0	1	156
	<b>Cluster Village</b>	165	917	165	0	0	0	0	4	748
10	Neemkhera	10	68	13	0	0	0	0	1	54
	<b>Control Village</b>	10	68	0	0	0	0	0	1	54
	<b>Total</b>	256	1434	261	0	0	2	0	9	1162

9.125 The above table shows that 81.03 percent family members against the 1434 persons are within the average income range of below Rs.1001.00 and above per month which seems obvious as the farming activities in our sample area is done on viable scale.

## AVERAGE MONTHLY EXPENDITURE

9.126 The table shows the details;

Table No. 9.46  
Average Monthly Expenditure

S. No.	Name of The Village	No. of families selected	No. of family members	Below Rs. 500	Rs. 501 to Rs. 600	Rs. 601 to Rs. 700	Rs. 701 to Rs. 800	Rs. 801 to Rs. 900	Rs. 901 to Rs. 1000	Rs. 1001 and Above
1	2	3	4	5	6	7	8	9	10	11
1.	Surajpur	20	111	20	0	0	0	0	0	91
2.	Minnora	24	136	22	0	0	1	0	4	109
3.	Charpua	37	202	36	1	0	0	0	1	164
	<b>Adopted Village</b>	81	449	78	1	0	1	0	5	364
4.	Sujanpura	6	29	5	0	0	0	0	0	24
5.	Papawani	34	186	32	0	0	0	0	0	154
6.	Bori	37	196	35	0	0	0	0	1	160
7.	Khiriya	21	119	19	0	0	0	0	1	99
8.	Ganesh Ganj	34	196	32	0	0	0	0	2	162
9.	Manikpura	33	191	31	0	0	0	0	1	159
	<b>Cluster Village</b>	165	917	154	0	0	0	0	5	758
10	Neemkhera	10	68	10	0	0	0	0	0	58
	<b>Control Village</b>	10	68	0	0	0	0	0	0	58
	<b>Total</b>	256	1434	242	1	0	1	0	10	1180

9.127 In line with information pertaining to income, 82.29 percent of family members are within the average expenditure range of Rs. 1001.00 and above.

#### **9.128 To sum up**

- **To premise of this part of write-up is 256 households which is around 25 percent of 1020 number of households.**
- **Out of the total of 1434 number of persons from 256 households males constitute 51.60 percent while females constitute 48.40 percent.**
- **The percentage of males within the age group of 20 to 60 years representing labour force is 42.43 while for females it is 45.39 that underlines one fact that in case of technology transfer relating to agriculture more number of persons may be benefited.**
- **The percentage of dependent population among males is 28.92 and for females 29.68, is within fair limit, which is a positive indicator.**
- **Against the total of 1434 persons among sample households the percentage literacy is 73.85, far above than the district average of 55.80 percent and the state average of 64.11 percent.**
- **The percentage of children in the levels of elementary education is 50.77 that vouches for the fair impact of the programme of Universalisation of Elementary Education over our area of study.**
- **The bulk of 16.74 percent of farming community is constituted by small farmers and farmers having sizeable land holdings.**
- **The pursuance of secondary and tertiary sector activities, in our area of study, is negligible.**
- **The involvement of 10 persons for activity relating to livestock as subsidiary occupation is somewhat encouraging.**
- **There are only 2 persons engaged in secondary sector as subsidiary occupation which is far from being satisfactory.**
- **The incorporation of 81.03 percent family members within the average monthly income range of Rs. 1001 and above and similar percentage of 82.29 family members within the average monthly expenditure of Rs. 1001.00 and above is the sure indication of the affluence level of the area.**

### **RESULTS OF SURVEY**

#### **SUBJECTS OF TRAINING RECEIVED– ADOPTED AND CLUSTER VILLAGES**

9.129 At the outset it is necessary to clarify the point that there are 246 number of families out of the total number of 256 families [96.09 percent] who took part in vocational training, front line demonstration and on farm testing which are the three basic mandates of K.V.K. Therefore, the total of responding families from vocational training, front line demonstration and on farm testing will not tally with the figure of 246 as from this basic figure the families participated in three fundamental activities. The entire analysis is based upon family approach as normally one member from each family from adopted and cluster villages where there is direct intervention of K.V.K. takes part in various training programmes. In what follows an attempt has been made to present the item wise details of various initiatives adopted by K.V.K. in the fields of vocational training, front line demonstrations and on farm testing.

#### **VOCATIONAL TRAINING**

9.130 The table below shows the details;

Table No. 9.47  
Subjects of Training Received – Vocational Training.

S. No.	Name of Village	No. of Respondents	Subject on Which Training Received					
			Crop Prod Agronomy	Horticulture	Livestock Dairying Poultry	Fisheries	Home Science	Organic Farming
1	2	3	4	5	6	7	8	9
1	Surajpur	20	20	10	0	0	12	5
2	Minnora	24	24	7	3	0	10	5
3	Charpua	37	37	10	0	1	15	9
<b>I</b>	<b>Adopted Village</b>	81	81	27	3	1	37	19
4	Sujanpura	6	6	6	0	0	6	6
5	Papawani	33	33	5	0	0	5	5
6	Bori	37	37	7	4	0	12	6
7	Khiriya	21	20	7	1	0	8	3
8	Ganesh Ganj	34	34	12	0	1	11	7
9	Manikpura	34	34	8	0	0	0	2
<b>II</b>	<b>Cluster Village</b>	165	164	45	5	1	42	29
	<b>Total All Villages</b>	246	245	72	8	2	79	48

9.131 The response of 245 families which is 99.59 percent to 246 responding families seems obvious as the traditional crops are still in vogue in our area of study followed by home science activities by 79 families [32.11 percent to total of 246 responding families] that indicates the involvement mainly of women to adopt occupation for augmentation of family income. The participation of 72 and 48 families for subjects like horticulture and organic farming is an encouraging deviation. The involvement of 8 and 2 number of family representatives for occupations like livestock, dairying, poultry and fisheries respectively is quite encouraging as in most of the K.V.Ks. the families have hardly shown any inclination for these activities.

### FRONT LINE DEMONSTRATION

9.132 The main objective of the front line demonstration is to demonstrate newly released crop production and protection technologies and its management practices in the farmer's fields. However, in front line demonstrations, the interactions regarding home science activities, training of rural youth and all the other items as specified for vocational training are done to educate and support the farmers for augmentation of income. The table below shows the details;

Table No. 9.48  
Subjects of Training Received – Front Line Demonstration

S. No	Name of The Village	No. of Respondents	Subject on Which Training Received		
			Crop Prod Agronomy	Horticulture	Live Stock, Dairying Poultry
1	2	3	4	5	6
1	Surajpur	8	8	0	0
2	Minnora	7	7	0	0
3	Charpua	10	10	0	0
<b>I</b>	<b>Adopted Village</b>	25	25	0	0
4	Sujanpura	2	2	0	0
5	Papawani	8	8	0	0
6	Bori	6	6	0	0
7	Khiriya	3	3	0	0
8	Ganesh Ganj	7	7	0	0
9	Manikpura	2	2	0	0
<b>II</b>	<b>Cluster Village</b>	28	28	0	0
	<b>Total All Villages</b>	53	53	0	0

9.133 The above table shows that out of total number of 246 responding families 53 households i.e. 21.54 percent have responded to front line demonstrations for agronomical production only. **A total gap in participation in subjects like fisheries, home science, training of rural youth, agro-forestry, organic farming and watershed activities shows that cultivators are basically interested in enhancing their agriculture related productivity with basic understanding that once the income from agriculture is enhanced the other activities allied to agriculture will gradually develop. However, the efforts may be made by the K.V.K. scientists to arrange a few vocational training on livestock activities, agro forestry and watershed activities as these are very relevant occupations for rural economy.**

## ON FARM TESTING

9.134 In this practice the farmers participate in identifying problems and priorities and managing experiment and evaluating results. It is, therefore, an adaptive research with farmers perspective. The basic objective of on farm testing is to identify existing inputs or practices that might help to solve major problems of many farmers in a defined study area. The table below shows the details;

Table No. 9.49  
Subjects of Training Received – On Farm Testing

S. No.	Name of The Village	No. of Respondents	Subject On Which Training Received		
			Crop Prod Agronomy	Horticulture	Live Stock Dairying Poultry
1	2	3	4	5	6
1	Surajpur	4	4	0	0
2	Minnora	4	4	0	0
3	Charpua	4	4	0	0
I	<b>Adopted Village</b>	12	12	0	0
4	Sujanpura	0	0	0	0
5	Papawani	0	0	0	0
6	Bori	0	0	0	0
7	Khiriya	0	0	0	0
8	Ganesh Ganj	0	0	0	0
9	Manikpura	0	0	0	0
II	<b>Cluster Village</b>	0	0	0	0
	<b>Total All Villages</b>	12	12	0	0

9.135 The above table shows that out of the total of 246 responding families, only 12 households [4.88%] have responded to the programme that too for agronomy in adopted villages. A large participation is not also expected as only bigger cultivators can afford getting such activity organised on their field. However, a few more O.F.Ts. covering subjects like horticulture, livestock, organic farming should have been organised as the response of these subjects for vocational training is substantial.

**9.136 The basic facts as revealed by above narration are that most of the cultivators are interested in training programmes relating to crop production, horticulture and home science which have direct relevance to their income. Livestock and poultry activities and fisheries are the areas where the villagers have hardly only marginal interest.**

## IMPACT OF K.V.K.

9.137 In the foregoing paragraphs the analysis of subject wise training received was presented. In what follows an attempt has been made to present the impact of individual items of training in the broad categories of;

- Vocational Training
- Front Line Demonstration
- On Farm Testing

**both before and after training [BT, AT] situations. This is the most important part of the report that clearly indicates the impact of K.V.Ks. intervention on agronomy, horticulture, livestock and dairying, fisheries, home science etc.**

### VOCATIONAL TRAINING – AGRONOMY - CEREALS

9.138 The table below shows the impact of K.V.K's. intervention over cereal crops;

Table No. 9.50  
Agronomy – Cereals

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Wheat			Paddy		
		No. of Respondents	BT	No. of Respondents	BT	No. of Respondents	BT
1	2	3	4	5	6	7	8
1	Surajpur	15	4300	4580	0	0	0
2	Minnora	17	4135	4353	8	2360	2540
3	Charpua	37	3773	4084	12	3670	4100
I	<b>Adopted Village</b>	69			20		
4	Sujanpura	6	3617	3883	2	3140	4051
5	Papawani	33	3715	4018	9	2580	2970
6	Bori	37	3622	3962	16	3151	4011
7	Khiriya	20	3345	3660	8	2610	2840
8	Ganesh Ganj	29	4283	4555	0	0	0
9	Manikpura	24	4100	4492	0	0	0
II	<b>Cluster Village</b>	149			35		
	<b>Total All Villages</b>	218			55		

Table No. 9.50 [Contd...]  
Agronomy – Cereals

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Maize			Jowar		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Surajpur	0	0	0	1	1500	0
2	Minnora	0	0	0	0	0	0
3	Charpua	13			9	1144	1389
I	<b>Adopted Village</b>	13	1862	2115	10		
4	Sujanpura	6	1717	1967	2	900	1300
5	Papawani	9	1833	2100	10	990	1200
6	Bori	12	1667	1975	9	978	1122
7	Khiriya	12	1708	2017	7	957	1143
8	Ganesh Ganj	0	0	0	1	1300	1500
9	Manikpura	0	0	0	1	0	2100
II	<b>Cluster Village</b>	39			30		
	<b>Total All Villages</b>	52			40		

**9.139 Regarding wheat crop** the responding family representatives are 218 which is 88.62 to total of 246 number of responding families who have shown interest in vocational training regarding wheat crop. **The after training [A.T.] scenario is much better than before training situation wherein the per hectare yield ranged between 2883 kg per hectare for village Sujanpura [cluster village] to 4580 kg per hectare for village Surajpur [adopted village] – obviously much higher than the district and State average per hectare yield rates of 2162 and 1867 kg respectively. The above fact clearly indicates the positive effects of vocational training imparted by the K.V.K. over the wheat crop.**

9.140 Regarding paddy crop the per-hectare yield in after training situation for every village is higher than before training situation that ranged between 2840 kg for village Khiriya [cluster village] to 4100 kg for village Charpua [adopted village] much higher than district and state average figures of 887 kg and 1058 kg respectively.

9.141 Regarding maize, 52 number of families [21.14 percent] have participated in the vocational training programme with yield rates in A.T. situations ranging between 1967 kg per hectare for village Sujanpura [cluster village] to 2115 kg for village Charpua [adopted village], higher than district average of 1379 kg. and state average productivity of 1342 Kg.

9.142 Regarding Jowar, 40 number of family members have responded to the training programme with yield rates higher in AT situations as compared to BT situations.

## VOCATIONAL TRAINING – AGRONOMY – PULSES

9.143 The table below shows the details

Table No. 9.51  
Agronomy – Pulses

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Gram			Arhar			Lentil		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Surajpur	12	1850	2100	9	1389	1678	7	991	1190
2	Minnora	18	2810	3190	8	1450	1588	9	1400	1570
3	Charpua	11	1670	1960	12	1542	1783	5	1516	1591
I	<b>Adopted Village</b>	41			29			21		
4	Sujanpura	4	2145	3212	4	1575	1800	0	0	0
5	Papawani	8	1200	1430	8	1588	1788	0	0	0
6	Bori	12	1630	1920	8	1438	1738	0	0	0
7	Khiriya	12	1770	2070	14	1514	1671	0	0	0
8	Ganesh Ganj	23	2512	3141	18	1428	1544	8	1180	1430
9	Manikpura	25	2914	3012	12	1325	1608	4	1158	1970
II	<b>Cluster Village</b>	84			64			12		
	<b>Total All Villages</b>	125			93			33		

- 9.144 In pulses group Gram, Arhar and Lentil are the important crops of Tikamgarh district. **Regarding Gram**, against the total of 246 households, 125 households [50.81 percent] have participated in vocational training. **The after training performance that resulted in per hectare yield ranging between 1430 kg for village Sujanpura [cluster village] to 3141 kg for village Ganesh Ganj [cluster village] is much higher than district and State average figures of 1473 kg and 932 kg per hectare respectively.**
- 9.145 Regarding Arhar crop, 43 households [37.80 percent] have responded to vocational training which is reflected in enhanced productivity **in after training situations that ranged between 1544 kg per hectare for village Ganesh Ganj [cluster village] to 1800 kg for village Sujanpura [cluster village] far above than district and state average productivity of 582 kg and 825 kg per hectare respectively.**
- 9.146 Regarding Lentil crop, 33 number of households [13.41 percent] have responded to the vocational training resulting in higher yield per hectare in after training situations as compared to before training conditions that ranged between 1430 kg per hectare for village Ganesh Ganj [cluster village] to 1970 kg per hectare for village Manikpura [cluster village] exceeding the district and state average productivity of 576 kg and 506 kg respectively.

#### VOCATIONAL TRAINING – AGRONOMY – OIL SEEDS

- 9.147 The table below shows the details;

Table No. 9.52  
Agronomy – Oil Seeds

S. No	Name of The Village	Yield Per- Hectare - Kg.								
		Soyabeen			Mustard			Linseed		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	6	6	6	6	7	8	9	10	11
1	Surajpur	19	1950	2651	10	1440	1500	0	0	0
2	Minnora	20	1189	3121	9	1511	1656	0	0	0
3	Charpua	26	1996	3559	12	1600	1833	0	0	0
I	<b>Adopted Village</b>	65			31			0		
4	Sujanpura	0	0	0	0	0	0	0	0	0
5	Papawani	15	2450	2810	10	1380	1700	0	0	0
6	Bori	21	1971	2951	10	1470	1660	0	0	0
7	Khiriya	12	2140	2480	9	1133	1311	0	0	0
8	Ganesh Ganj	27	2159	2991	12	1442	1717	4	2159	3001
9	Manikpura	19	2168	3003	12	1433	1708	0	0	0
II	<b>Cluster Village</b>	94			53			4		
	<b>Total All Villages</b>	159			84			4		

9.148 Regarding Soybean crop 159 households [64.63 percent to total of 246 responding families] took part in vocational training programme resulting in the yield rate ranging between 2651 kg for village Surajpur [adopted village] to 3559 kg for village Charpua [adopted village] in after training situation which is higher than district and state average figures of 1462 kg and 1132 kg per hectare respectively.

9.149 Regarding Mustard crop 84 households [31.15 percent] have taken part in vocational training with yield rates in A.T. situations higher than B.T. situations that ranged between 1311 kg per hectare for village Khiriya [cluster village] to 1833 kg per hectare for village Charpua [adopted village], higher than the district and state average productivities of 567 kg and 1009 kg respectively.

9.150 As regards Linseed crop only 4 number of households [1.63 percent] from village Ganesh ganj [cluster village] have taken part in vocational training with 3001 kg per hectare production in after training situations, higher than average productivity of 468 kg and 452 kg at district and state levels respectively.

9.151 The participation of households for receiving training on crops like sugarcane and cotton is nil that clearly indicates the lack of interest of cultivators of Tikamgarh district in pursuing the cultivation of these crops. The impact of vocational training, thus, will not be visible over such crops.

## **HORTICULTURE**

9.152 Horticulture crops are important from the view points of employment generation, checking of soil erosion and providing high density green cover to the soil. Being tough, many of these crops may be successfully grown on waste land not suitable for traditional crop cultivation. The table below shows the status of horticulture crop production in the sample area of our study;



Table No. 9.53  
Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal					
		Potato			Onion		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Surajpur	10	269	288	6	106	117
2	Minnora	8	254	276	3	119	291
3	Charpua	6	198	232	0	0	0
I	<b>Adopted Village</b>	24			9		
4	Sujanpura	2	190	205	0	0	0
5	Papawani	2	190	215	0	0	0
6	Bori	5	203	214	0	0	0
7	Khiriya	7	200	210	0	0	0
8	Ganesh Ganj	12	267	287	4	106	115
9	Manikpura	8	224	254	3	115	214
II	<b>Cluster Village</b>	36			7		
	<b>Total All Villages</b>	60			16		

Table No. 9.53 [Contd...]  
Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Quintal					
		Tomato			Brinjal		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	9	10	11	12	13	14
1	Surajpur	3	190	230	4	180	310
2	Minnora	4	203	203	0	0	0
3	Charpua	6	198	231	3	211	350
I	<b>Adopted Village</b>	13			7		
4	Sujanpura	2	205	208	2	301	381
5	Papawani	3	210	225	2	297	299
6	Bori	5	216	228	1	180	200
7	Khiriya	7	196	211	6	129	132
8	Ganesh Ganj	4	200	223	2	216	305
9	Manikpura	3	193	210	1	180	210
II	<b>Cluster Village</b>	24			14		
	<b>Total All Villages</b>	37			21		

Table No. 9.53 [Contd...]  
Horticulture Crops

S. No.	Name of The Village	Yield Per- Hectare - Kg.								
		Papaya			Chilly			Bhindi		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	15	16	17	18	19	20	21	22	23
1	Surajpur	0	0	0	4	148	175	2	130	170
2	Minnora	0	0	0	4	170	193	1	100	100
3	Charpua	3	0	105	1	220	220	1	100	110
I	<b>Adopted Village</b>	3			9			4		
4	Sujanpura	0	0	0	1	215	210	1	100	108
5	Papawani	0	0	0	1	240	248	2	200	225
6	Bori	0	0	0	1	200	210	1	100	110
7	Khiriya	0	0	0	2	225	248	0	0	0
8	Ganesh Ganj	0	0	0	7	199	226	4	189	286
9	Manikpura	0	0	0	5	168	176	2	150	200
II	<b>Cluster Village</b>	0			17			10		
	<b>Total All Villages</b>	3			26			14		

- 9.153 The above table shows that in case of **Potato 60** number of families have participated in the vocational training which is 24.39 percent to total of 246 responding families. For every village the per-hectare yield in after training situation is higher than before training conditions that ranged between 205 quintal per hectare for village Sujanpura [cluster village] to 288 quintal per hectare for village Surajpur [adopted village]. These yield rates are much higher than the State average figure of 119 quintal per hectare. The positive impact of the efforts of the K.V.K., is, thus, obvious.
- 9.154 Regarding **Onion, 16** number of households [6.50 percent] have responded to the vocational training, resulting in enhanced per-hectare yield in after training situations as compared to before training conditions that ranged between 115 quintal per-hectare for village Ganesh Ganj [cluster village] to 291 quintal per hectare for village Minnora [adopted village] which are much higher than State average figure of 140 quintal per hectare.
- 9.155 **Tomato** is yet another crop which is gradually picking-up at Tikamgarh as 37 families have participated in the vocational training constituting 15.04 percent to total of 246 responding families. The yield rates in after training conditions ranged between 203 quintal per hectare for village Minnora [adopted village] to 231 quintal per-hectare for village Charpua [adopted village].
- 9.156 **Brinjal** too is a crop getting popular at Tikamgarh as 21 number of families [8.54 percent] have shown interest in training programme, the positive effects of which have been reflected in the form of enhanced per-hectare yield in after training situations as compared to before training conditions that ranged between 210 quintal per-hectare for village Manikpura [cluster village] to 381 quintal per-hectare for village Sujanpura [cluster village].
- 9.157 **For Chilly crop,** 26 families have taken part in vocational training with yield rates that ranged between 175 quintal per hectare is village Surajpur [adopted village] to 248 quintal per hectare in village Khiriya [cluster village] in after training situation.
- 9.158 Similarly for **Bhindi crop,** 14 number of families [5.69 percent] have taken part in vocational training programme resulting in enhanced productivity in after training situations as compared to before training status that ranged between 100 quintal per-hectare for village Minnora [adopted village] to 286 quintal per-hectare for village Ganesh Ganj [cluster village].
- 9.159 As regards **Papaya,** only 3 household from village Charpua [adopted village] has taken part in the vocational training programme resulting in output of 105 quintal per hectare in after training conditions.
- 9.160 For crops like Cucerbites, Spices, Mango, Banana and Citrus, no vocational training programmes have been organised as the cultivators were not interested in producing such crops.**

#### **VOCATIONAL TRAINING – LIVESTOCK AND DAIRY**

- 9.161 Though these functions are important from the view points of both income augmentation and diversification of agriculture for reducing pressure on land in rural areas but in general such functions are not taken-up on viable scale with proper organizational skill as is evident from the information contained in the following table;

Table No. 9.54  
Live Stock and Dairying

S. No.	Name of The Village						
		Improved Breed (No.)			Milk production (Liters)		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Surajpur	0	0	0	0	0	0
2	Minnora	1	0	5	3	13	12
3	Charpua	0	0	0	0	0	0
I	<b>Adopted Village</b>	1	0	5	3	13	12
4	Sujanpura	0	0	0	0	0	0
5	Papawani	0	0	0	0	0	0
6	Bori	2	0	6	2	9	16
7	Khiriya	1	0	4	1	10	15
8	Ganesh Ganj	0	0	0	0	0	0
9	Manikpura	0	0	0	0	0	0
II	<b>Cluster Village</b>	3	0	10	3	19	31
	<b>Total All Villages</b>	4	0	15	6	32	43

Table No. 9.54 [Contd...]  
Live Stock and Dairying

S. No	Name of The Village									
		Artificial Insemination (No. of animals)			Improved Feeding Management			Vaccination (No. of animals)		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Surajpur	0	0	0	0	0	0	0	0	0
2	Minnora	1	8	0	3	2	1	0	0	0
3	Charpua	0	0	0	0	0	0	0	0	0
I	<b>Adopted Village</b>	1	8	0	3	2	1	0	0	0
4	Sujanpura	0	0	0	0	0	0	0	0	0
5	Papawani	0	0	0	0	0	0	0	0	0
6	Bori	2	0	6	2	2	0	0	0	0
7	Khiriya	0	0	0	1	4	0	1	1	4
8	Ganesh Ganj	0	0	0	0	0	0	0	0	0
9	Manikpura	0	0	0	0	0	0	0	0	0
II	<b>Cluster Village</b>	2	0	6	3	6	0	1	1	4
	<b>Total All Villages</b>	3	8	6	6	8	1	1	1	4

9.162 The performance in this field is on the low key as only 4,6,3,6, and 1 number of households have taken part in vocational training regarding improved breeding practices, milk production, artificial insemination, improved feeding management and vaccination respectively with not much physical results. **However, the picture that emerges is encouraging as in other five K.V.Ks. the vocational training regarding livestock and dairying is either entirely missing or performed very marginally.**

#### VOCATIONAL TRAINING – POULTRY

9.163 Poultry is yet another activity which is relevant to rural economy for augmentation of family income. The table below shows the details;

Table No. 9.55  
Poultry Activities - Broiler Production

S. No	Name of The Village	Broiler Production		
		No. of Respondents	Yes	No
1	2	3	4	5
1	Surajpur	0	0	0
2	Minnora	0	0	0
3	Charpua	0	0	0
I	<b>Adopted Village</b>	0	0	0
4	Sujanpura	0	0	0
5	Papawani	0	0	0
6	Bori	0	0	0
7	Khiriya	0	0	0
8	Ganesh Ganj	1	0	1
9	Manikpura	0	0	0
II	<b>Cluster Village</b>	1	0	1
	<b>Total All Villages</b>	1	0	1

9.164 For broiler production, only one number of household from village Ganesh ganj [cluster village] has taken part in vocational training without any tangible result in after training situation.

#### VOCATIONAL TRAINING – HOME SCIENCE

9.165 Vocational training in Home Science activities like toy making, preparation of pickles and jute items, preparation of papad/bari/jam/jelly etc. are important from both income support and employment generation point of views engaging women and old people in rural areas. The table below shows the details;

Table No. 9.56  
Home Science Activities

S. No	Name of The Village	Toy making			Pickle, Kg.			Papad/Badi/Jam/Jelly, Kg.		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Surajpur	0	0	0	12	26	91	8	1	16
2	Minnora	0	0	0	8	16	52	5	1	9
3	Charpua	0	0	0	13	15	53	13	3	54
I	<b>Adopted Village</b>	0	0	0	33	57	196	26	5	79
4	Sujanpura	0	0	0	6	7	28	6	3	17
5	Papawani	0	0	0	5	3	22	5	5	21
6	Bori	0	0	0	10	11	45	10	2	30
7	Khiriya	0	0	0	7	3	28	6	3	19
8	Ganesh Ganj	3	0	10	11	65	41	11	7	28
9	Manikpura	0	0	0	0	0	0	0	0	0
II	<b>Cluster Village</b>	3	0	10	39	89	164	38	20	115
	<b>Total All Villages</b>	3	0	10	72	146	360	64	25	194

9.166 Preparation of **Pickles** is an item getting popular in rural areas as 72 number of family representatives have taken part in the vocational training constituting 29.27 percent of total of 246 responding families with production of 360 kgs of pickle in after training situation as compared to 146 kgs of pickle in before training conditions. The impact of K.V.Ks. effort is clearly visible.

- 9.167 Regarding **Toy making** which is not very popular in our sample area of study, only 3 number of households from village Ganesh Ganj [cluster village] have taken part in vocational training **with making of only 10 toys in after training conditions.**
- 9.168 **Regarding preparation of paper/badi/jam/jelly etc.,** which is becoming popular activity in our area of study mainly due to portability of the product, 64 household [26.02 percent] have taken part in vocational training organised by the K.V.K. with production of 194 kg in after training situation as compared to 25 Kg. production in before training conditions **that underlines the positive impact of the K.V.Ks. efforts.**

#### VOCATIONAL TRAINING – TRAINING OF RURAL YOUTH

- 9.169 Training of rural youth, though do not have any direct relevance to transfer of agriculture related technology, but has immense impact on employment generation. The table below shows the details;

Table No. 9.57  
Training of Rural Youth

S. No	Name of The Village	Motor binding			Engine repair		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Surajpur	1	0	1	0	0	0
2	Minnora	0	0	0	0	0	0
3	Charpua	0	0	0	0	0	0
I	<b>Adopted Village</b>	1	0	1	0	0	0
4	Sujanpura	0	0	0	0	0	0
5	Papawani	0	0	0	0	0	0
6	Bori	0	0	0	0	0	0
7	Khiriya	1	0	2	1	1	0
8	Ganesh Ganj	0	0	0	0	0	0
9	Manikpura	0	0	0	0	0	0
II	<b>Cluster Village</b>	1	0	2	1	1	0
	<b>Total All Villages</b>	2	0	3	1	1	0

- 9.170 Regarding **motor binding** activity two family members from village Surajpur [adopted village] and village Khiriya [cluster village] have taken part in the training with placement.
- 9.171 Similarly for tractor, diesel engine repair only one number of family member from village Khiriya [cluster village] has undergone the training and got placement.

#### VOCATIONAL TRAINING – ORGANIC FARMING

- 9.172 The table below shows the details;

Table No. 9.58  
Organic Farming

S. No.	Name of The Village	Bio-Pesticide, Kg.		
		No. of Respondents	BT	AT
1	2	6	7	8
1	Surajpur	4	10	130
2	Minnora	3	0	60
3	Charpua	8	1	11
I	<b>Adopted Village</b>	15	11	201
4	Sujanpura	0	0	0
5	Papawani	4	0	7
6	Bori	4	0	6
7	Khiriya	2	0	6
8	Ganesh Ganj	0	0	0
9	Manikpura	0	0	0
II	<b>Cluster Village</b>	10	0	19
	<b>Total All Villages</b>	25	11	220

9.173 The practice of organic farming is gradually picking up in our area of study as 25 number of households have participated in the training programme relating to **Bio-pesticide** with production of 220 liters of bio-pesticide in after training situation as compared to 11 liters in before training conditions.

9.174 **No vocational training has been organised on subjects like fishery development, agro forestry and watershed activities which are important functions from the view point of income augmentation in rural areas. The impact of vocational training over such activities will not visible.**

9.175 **In the following paragraphs** an attempt has been made to sum-up the efforts of vocational training imparted by the K.V.K.

- **Regarding the yield per hectare both for agronomical and horticultural crops, the after training situation is better than before training conditions that clearly shows the positive impact of vocational training imparted by the K.V.K.**
- **Regarding wheat crop 88.62 percent households to total of 246 responding families have taken part in vocational training with per-hectare yield higher than the district and state level average productivity.**
- **Similarly for paddy crop the productivity is much higher than the average productivity levels prevailing in district and in state.**
- **Regarding maize crop 21.14 percent households have taken part in vocational training with yield rates in after training situations higher than average productivity both at district and state levels.**
- **Regarding gram crop 50.81 percent households to total of 246 responding households have taken part in vocational training with yield rates much higher than average productivity at district and state levels in after training situation.**
- **Similarly for arhar and lentil crops 37.80 percent and 13.41 percent households respectively have taken part in vocational training with yield rates exceeding as compared to average productivity both at district and state levels in after training conditions.**
- **As regards soybean, 64.63 percent households have taken part in vocational training with yield rates much higher in after training situations as compared to average productivity both at district and state levels.**
- **Similarly for mustard and linseed crops the yield per-hectare in after training situation is higher than the average productivity both at district and state levels.**
- **Regarding horticulture crops, the vocational trainings have been organised for crops like potato, onion, tomato, brinjal, chilly, bhindi and papaya with rate of participation**

of 24.39 percent, 6.50 percent, 15.04 percent, 8.54 percent, 10.60 percent, 5.69 percent and 1.22 percent respectively with yield rates higher in A.T. situations as compared to B.T. conditions. This is no doubt a very bright picture indicating the desire of farming community to deviate from producing traditional crops.

- In case of livestock, dairy and poultry though the response is marginal, but, somehow, the picture is encouraging.
- Response to home science activities is quite encouraging particularly for items like preparation of pickles and papad/bari/jam/jelly etc.
- The response to training of rural youth is only marginal but for organic farming which is encouraging.
- No vocational trainings have been organised for subjects like fishery, agro-forestry and watershed activities which are important functions from the view points of income augmentation in rural areas.

## FRONT LINE DEMONSTRATION – AGRONOMY CEREALS

9.176 Front line demonstrations [FLD] are organized on farmer's field with the result the response is bound to be low as compared to vocational training. The table below shows the impact of front line demonstrations on cereal crops.

Table No. 9.59  
Agronomy – Cereals

S. No	Name of The Village	Wheat			Paddy			Maize		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Surajpur	3	4267	4800	0	0	0	0	0	0
2	Minnora	2	4050	4700	0	0	0	0	0	0
3	Charpua	8	3913	4200	2	2140	2598	0	0	0
I	<b>Adopted Village</b>	13			2			0		
4	Sujanpura	1	3500	4000	0	0	0	0	0	0
5	Papawani	5	3680	4200	1	3000	3400	0	0	0
6	Bori	3	3667	4133	0	0	0	2	1700	2000
7	Khiriya	2	3700	4005	0	0	0	0	0	0
8	Ganesh Ganj	2	4200	4850	0	0	0	0	0	0
9	Manikpura	0	0	0	0	0	0	0	0	0
II	<b>Cluster Village</b>	13			1			2		
	<b>Total All Villages</b>	26			3			2		

9.177 The front line demonstrations for the **wheat crop** have been organized on the fields of 26 cultivators which is 10.57 percent to total of 246 responding families. The per hectare yield in after training situation is much higher than before training conditions that ranged between 4000 kg. per hectare for the village Sujanpura [cluster village] to 4850.00 kg per hectare for village Ganesh Ganj [cluster village] far in excess of district average of 2162 kg and state average of 1867 kg. The positive impact of the efforts of K.V.K. is clearly visible.

9.178 Regarding paddy crop only 3 F.L.D. have been organised that ranged between 2140 kg. for village Charpua [adopted village] to 3000 kg per hectare for village Papawani [cluster village] in after training situation which is much higher than district and state average productivities of 887 kg and 1058 kg respectively.

9.179 Regarding **Maize crop** only 2 demonstration has been organised in village Bori [cluster village] with per hectare yield of 2000 kg in after training situation which is not only higher than the productivity in before training situation but in excess of district average

productivity of 1226 kg and less than state average 2072 kg per hectare. **However matching to vocational training, a few more F.L.Ds. should have been organised.**

**9.180 No F.L.Ds. have been organised for crop like Jowar which is usually grown by poor cultivators.**

## AGRONOMY - PULSES

9.181 The table below shows the details;

Table No. 9.60  
Agronomy – Pulses

S. No	Name of The Village	Gram			Arhar			Lentil		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Surajpur	1	1400	1900	1	1400	1700	0	0	0
2	Minnora	1	1900	2000	1	1700	1800	1	1300	1900
3	Charpua	1	1400	1600	1	1400	1600	0	0	0
I	<b>Adopted Village</b>	3			3			1		
4	Sujanpura	0	0	0	1	1400	1600	0	0	0
5	Papawani	0	0	0	0	0	0	0	0	0
6	Bori	0	0	0	0	0	0	0	0	0
7	Khiriya	0	0	0	0	0	0	0	0	0
8	Ganesh Ganj	2	3200	3900	1	1400	1800	0	0	0
9	Manikpura	1	1700	2000	0	0	0	0	0	0
II	<b>Cluster Village</b>	3			2			0		
	<b>Total All Villages</b>	6			5			1		

9.182 **Gram being** one of the important crops of Tikamgarh district, 6 number of front line demonstration [F.L.Ds.] have been organised which is 2.44 percent to total of 246 responding families with better performance in after training situation as compared to before training conditions. The per hectare yield in after training situation ranged between 1600 Kg for Charpua [adopted village] to 3900 kg for Ganesh Ganj [cluster village] which are higher than the district average productivity figure of 1473 kg and state level figure of 932 kg.

**9.183 Regarding Arhar crop** only 5 number of F.L.Ds. have been organised resulting in crop productivity which is higher in after training situation as compared to before training conditions and far in excess of average district and state level productivity per hectare accounting for 582 kg and 825 kg respectively.

9.184 Regarding Lentil crop only one number of F.L.D. has been organised for village Minora with per hectare yield of 1900 kg in after training situation which is higher than the district and state average productivity of 576 kg and 506 kg respectively.

## FLD – AGRONOMY – OIL SEEDS

9.185 The table below shows the details;



Table No. 9.61  
Agronomy – Oil Seeds

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Soybean			Mustard		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Surajpur	1	1700	2300	2	1650	2150
2	Minnora	1	2000	2100	1	1600	1805
3	Charpua	2	2151	3001	1	1700	1800
<b>I</b>	<b>Adopted Village</b>	4			4		
4	Sujanpura	0	0	0	0	0	0
5	Papawani	1	1900	2300	1	1600	1900
6	Bori	1	2100	2300	1	1900	2200
7	Khiriya	1	1800	2400	0	0	0
8	Ganesh Ganj	2	2589	3145	0	0	0
9	Manikpura	1	2000	2300	0	0	0
<b>II</b>	<b>Cluster Village</b>	6			2		
	<b>Total All Villages</b>	10			6		

9.186 Soybean being one of the important crops of district Tikamgarh 10 number of F.L.Ds. have been organised which 4.07 percent to total of 246 responding families. The yield per hectare in after training situation is much higher than before training conditions that ranged between 2100 kg per hectare for village Minnora [adopted village] to 3145 kg per hectare for village Ganeshganj [cluster village] higher than both district and state average productivity of 1462 kg and 1132 kg respectively.

9.187 Regarding Mustard 6 number of F.L.Ds. have been organised [2.44 percent] with the yield rates higher in AT situations that ranged between 1800 kg per hectare for village Charpua [adopted village] to 2200 kg per hectare for village Bori [cluster village] which are higher than district and state average productivities of 567 kg and 1009 kg respectively.

9.188 No FLDs have been organized for crops like Jowar, cotton, sugarcane and linseed with the result the impact of F.L.Ds. over these crops will not be visible.

### **FLD – HORTICULTURE**

9.189 No F.L.Ds. have been organised for any of the crops regarding horticulture which is a definite gap that indicates that no technology has been transferred to such crops despite good response of vocational training.

**9.190 Regarding subjects like Horticulture, livestock and dairying, poultry, fisheries development, home science, training of rural youth, agro-forestry, organic farming and watershed activities no F.L.Ds. have been organised. All the above mentioned activities are important for any rural economy. Particularly the subjects like livestock, agro forestry and watershed activities are important from the view points of income augmentation and enhancement of agriculture production. F.L.Ds, therefore, should have been organised for such activities.**

### **9.191 To sum-up**

- **Front Line Demonstrations organised in our area of study has lead to enhancement in productivity of most of agronomical and horticultural crops in after training situations as compared to before training conditions which show the positive impact of K.V.Ks. efforts.**

- In case of wheat 26 number of F.L.Ds. have been organised which is 10.57 percent to total of 246 responding families with yield per hectare far in excess of average productivity of district and state levels.
- Similarly for paddy and maize crops 3 and 2 F.L.Ds. respectively have been organised with higher yield rates as compared to district and state level averages.
- Gram being one of the important crops of Tikamgarh district 6 number of F.L.Ds. have been organised which is 2.44 percent to total of 246 number of responding families with higher productivity as compared to prevailing rates at both district and state levels.
- Similarly for Arhar crop 5 number of F.L.Ds. have been organised [2.03 percent] with per hectare yield far in excess of average district and state level productivity.
- Regarding Lentil crop 6 number of F.L.Ds. have been organised with yield per hectare higher than the average productivity prevailing at district and state levels.
- Regarding soybean and mustard 10 and 6 number of F.L.Ds. respectively have been organised with yield per hectare higher than the average productivity prevailing both at district and state levels.
- Since no F.L.Ds. have been organised on subjects like horticulture, livestock and dairying, fisheries development, home science, training of rural youth, agro forestry, organic farming and watershed activities the impact of F.L.D. for these subjects will not be visible.

#### ON FARM TESTING [OFT] - CEREALS

9.192 In case of On Farm Testing, recommended new technologies are tested on farmer's fields leading to the solution of group of farming problems. The extent of response is bound to be low as the new technologies are always limited in numbers.

9.193 The table below shows the details;

Table No. 9.62  
Cereal Crops

S. No.	Name of The Village	Yield Per- Hectare - Kg.		
		Wheat		
		No. of Respondents	BT	AT
1	Surajpur	1	4200	4800
2	Minnora	0	0	0
3	Charpua	3	3933	4233
I	<b>Adopted Village</b>	4		
4	Sujanpura	0	0	0
5	Papawani	0	0	0
6	Bori	0	0	0
7	Khiriya	0	0	0
8	Ganesh Ganj	0	0	0
9	Manikpura	0	0	0
II	<b>Cluster Village</b>	0		
	<b>Total All Villages</b>	4		

9.194 In case of Wheat, 4 number of on farm testing activities [1.63 percent] have been organised with substantial yield per hectare in after training situation that ranged between 4233 kg per hectare for village Charpua to 4800 kg per-hectare for village Surajpur which are much higher than the district average per hectare productivity of 2162 kg and state average figure of 1867 kg. All the O.F.Ts. have been organised at adopted villges leaving completely the cluster villages, which undoubtedly is a gap in performance.

9.195 In non other cereal crops like Maize, Paddy and Jowar the O.F.Ts. have been organised.

## ON FARM TESTING – PULSES CROP

9.196 The table below shows the details;

Table No. 9.63  
Pulses Crop

S. No	Name of The Village	Gram			Arhar			Lentil		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8	9	10	11
1	Surajpur	1	1400	2000	0	0	0	0	0	0
2	Minnora	1	1900	2000	1	1700	1800	1	1300	1900
3	Charpua	0	0	0	0	0	0	0	0	0
<b>I</b>	<b>Adopted Village</b>	2			1			1		
4	Sujanpura	0	0	0	0	0	0	0	0	0
5	Papawani	0	0	0	0	0	0	0	0	0
6	Bori	0	0	0	0	0	0	0	0	0
7	Khiriya	0	0	0	0	0	0	0	0	0
8	Ganesh Ganj	0	0	0	0	0	0	0	0	0
9	Manikpura	0	0	0	0	0	0	0	0	0
<b>II</b>	<b>Cluster Village</b>	0			0			0		
	<b>Total All Villages</b>	2			1			1		

9.197 Gram through one of the important crops of Tikamgarh district but only 2 O.F.Ts. have been organised [all in adopted villages] with productivity of 2000 kg per hectare for both Surajpur and Minnora villages in after training situations which are higher than before training conditions and in excess of district average productivity of 1473 kg per hectare and state average productivity of 932 kg per hectare.

9.198 Similarly, for Arhar and Lentil crops one number each of O.F.Ts. have been organised in villages Minnora [adopted village] with yields per hectare in after training situations which are far in excess of district level and state level per hectare yields of 501 and 576 kg and 825 kg, 506 kg respectively.

## ON FARM TESTING – OIL SEED CROP

9.199 The table below shows the details;

Table No. 9.64  
Oil Seed Crop

S. No.	Name of The Village	Yield Per- Hectare - Kg.					
		Soybean			Mustard		
		No. of Respondents	BT	AT	No. of Respondents	BT	AT
1	2	3	4	5	6	7	8
1	Surajpur	1	1800	2500	1	1500	1900
2	Minnora	1	2000	2400	0	0	0
3	Charpua	1	1800	2400	0	0	0
<b>I</b>	<b>Adopted Village</b>	3			1		
4	Sujanpura	0	0	0	0	0	0
5	Papawani	0	0	0	0	0	0
6	Bori	0	0	0	0	0	0
7	Khiriya	0	0	0	0	0	0
8	Ganesh Ganj	0	0	0	0	0	0
9	Manikpura	0	0	0	0	0	0
<b>II</b>	<b>Cluster Village</b>	0			0		
	<b>Total All Villages</b>	3			1		

- 9.200 Soybean and Mustard being important crops of Tikamgarh district only 3 number and 1 number of O.F.Ts. have been organised with much higher yield rates in after training situations as compared to district and state level per hectare yields.
- 9.201 No O.F.Ts. have been organised for crops like paddy, maize, jowar, cotton, sugarcane and linseed.
- 9.202 Surprisingly, no O.F.T. has been organised for any of the horticulture crops which obviously is a gap in performance. The O.F.Ts. should have been organised for crops like Potato, Onion, Tomato and Brinjal for which there is good response in vocational training courses. Besides, horticultural crops are good source of income which are gradually becoming popular in Tikamgarh district. The measures of O.F.Ts. would have boosted-up the productivity levels of such crops along with enhancement in family income.**
- 9.203 No. O.F.Ts. have been organised for subjects like horticulture, livestock and dairying, poultry, fishery development, home science, training of rural youth, agro-forestry, organic farming and watershed activities. A few O.F.Ts. should have been organised for livestock and dairying, agro forestry and watershed activities which have scope in our sample area of study.**
- 9.204 In the following paragraphs summing-up efforts have been made for the results of O.F.T.**
- **In case of O.F.T., the yield per-hectare in after training situation is more than before training conditions as has occurred for both vocational training and front line demonstrations which shows the positive impact of K.V.Ks. efforts.**
  - **No O.F.T. has been organised for any of the horticulture crops which certainly shows the deficiency in performance. A few O.F.Ts. must have been organised for horticulture crops like potato, onion and and tomato etc. which are common items of consumption.**
  - **Since no O.F.Ts. have been organised on subjects like livestock and dairying, poultry, fishery development, home science, training of rural youth, agro-forestry, organic farming and watershed activities, the impact of O.F.T. relating to such subjects is obviously not visible.**

#### **STATUS OF ACTIVITIES IN CONTROL VILLAGE – NEEMKHERA**

- 9.205 The study has identified one control village i.e. Neemkhera with 10 number of sample households and 68 sample family members where there is no interventions of K.V.K. The information regarding common items of agronomical and horticulture crops have been collected to show the comparative status in areas of intervention and non-intervention. However, in case of control village before and after training situations have not been shown as there is no effort of K.V.K. in this village. **For comparison the average performance of vocational training in after training situation has been taken as the participation regarding all subjects is maximum in case of vocational training.** The table below shows the comparative status of control village on one side and adopted and cluster villages on other side.

Table No. 9.65

## Comparative Status of Performance Among Control Village and Adopted and Cluster Villages

Sl. No.	Item	Control Village	Adopted and cluster villages (average)	Difference [+ or -] over col. 3
1	2	3	4	5
<b>PER HECTARE YIELD – KG</b>				
<b>CEREALS</b>				
1	Wheat	4060.00	4176.33	(+) 116.33
2	Paddy	3240.00	3418.67	(+) 178.67
3	Maize	2028.00	2034.80	(+) 6.80
4	Jowar	-	1393.43	-
<b>PULSES</b>				
5	Gram	1800.00	2448.33	(+) 648.33
6	Arhar	1629.00	1688.67	(+) 59.67
7	Lentil	1500.00	1550.20	(+) 50.20
<b>OIL SEEDS</b>				
8	Soybean	1970.00	2945.75	(+) 975.75
9	Mustard	1606.00	1635.63	(+) 29.63
10	Linseed	3000.00	3001.00	(+) 1.00
<b>HORTICULTURE CROPS – QUINTAL</b>				
11	Potato	240.00	242.33	(+) 2.33
12	Onion	179.00	184.25	(+) 5.25
13	Tomato	210.00	218.78	(+) 8.78
14	Brinjal	200.00	273.38	(+) 73.38
15	Chilly	210.00	212.22	(+) 76.63
16	Bhindi	87.00	163.63	(+) 114.60
17	Papaya	-	105.00	-

9.206 Except for the crops like Gram, Soybean, Wheat and Paddy where there is substantial gap in per hectare yield between adopted and cluster villages and control village in rest of the crops the difference is only marginal that shows the overall situation of agriculture is good in district Tikamgarh.

**9.207 In the field of home science activities particularly for activities like preparation of pickles and papad/badi/jam/jelly etc. substantial work has been done in adopted and cluster villages through the intervention of K.V.K. whereas such activities are very marginal in control village. These activities are important both form income augmentation and employment point of views.**

### RESULTS OF SURVEY – INDIVIDUAL PARTICULARS ADOPTED AND CLUSTER VILLAGES

9.208 In the following paragraphs an attempt has been made to highlight the various reactions of 25 percent of individuals taken from the sample family members. The table below shows the details;

Table No. 9.66  
Basic Details

Sl. No.	Item	Total number of family members of 25% of households	25 % of individuals taken from 25% of households
1	2	3	4
1	Adopted Villages	449	109
2	Cluster Villages	917	231
3	Control Village	68	16
	<b>Total</b>	<b>1434</b>	<b>356</b>

9.209 Though the 25 percent of 1434 comes to 358 but we have taken figures of 356 because of certain demographic particulars. However, a few figures plus or minus is hardly meaningful so long it does not vitiate the survey results.

9.210 In the following paragraphs an attempt has been made to highlight the individual reactions in **adopted and cluster villages** i.e. for **340 individuals**.

9.211 The criteria for selection of individuals are as follows;

- The individual should be the adult member of the family.
- He should be associated with any programme of K.V.K. For individuals of control village, this criterion is not applicable.
- He/She should be literate, may be without having any formal education.

### **SOCIAL CLASSIFICATION OF INDIVIDUALS**

9.212 The table below shows the details;

Table No. 9.67  
Social Classification

S. No.	Name of the Village	No. of Individual	Social classification			
			S.T.	S.C.	O.B.C.	GENERAL
1	2	3	4	5	6	7
1.	Surajpur	28	3	3	22	0
2.	Minnora	57	2	19	26	10
3.	Charpua	24	0	7	8	9
	<b>Adopted Village</b>	109	5	29	56	19
4.	Sujanpura	7	0	7	0	0
5.	Papawani	47	2	22	16	7
6.	Bori	49	0	3	39	7
7.	Khiriya	30	0	9	8	13
8.	Ganesh Ganj	48	0	20	17	11
9.	Manikpura	50	1	5	38	6
	<b>Cluster Village</b>	231	3	66	118	44
	<b>Total</b>	340	8	95	174	63

9.213 The above table shows that the majority of 269 individuals are from S.C. and O.B.C. communities that accounts for 79.12 percent to total of 340 individuals from adopted and cluster villages. The combined percentage of S.T. and General communities is 20.88. **Thus the entire area of adopted and cluster villages is predominated by S.C. and O.B.C. population that throws a challenge to K.V.K. Scientists to achieve tangible results for bringing these vulnerable communities to main stream of development.**

### **INDIVIDUALS CLASSIFIED ON THE BASIS OF RELIGION**

9.214 The following table gives the details;

Table No. 9.68  
Classification on the Basis of Religion

S. No.	Name of the Village	No. of Individual	Religion					
			Hindu	Muslim	Sikh	Christian	Nauabudh	Others
1	2	3	4	5	6	7	8	9
1.	Surajpur	28	28	0	0	0	0	0
2.	Minnora	57	57	0	0	0	0	0
3.	Charpua	24	24	0	0	0	0	0
	<b>Adopted Village</b>	109	109	0	0	0	0	0
4.	Sujanpura	7	7	0	0	0	0	0
5.	Papawani	47	47	0	0	0	0	0
6.	Bori	49	49	0	0	0	0	0
7.	Khiriya	30	30	0	0	0	0	0
8.	Ganesh Ganj	48	48	0	0	0	0	0
9.	Manikpura	50	50	0	0	0	0	0
	<b>Cluster Village</b>	231	231	0	0	0	0	0
	<b>Total</b>	340	340	0	0	0	0	0

9.215 The above table shows that cent-percent individuals are the followers of Hindu religion.

#### AWARENESS ABOUT THE K.V.K.

9.216 The table below shows the details;

Table No. 9.69  
Awareness About the K.V.K.

S. No	Name of the Village	No. of Individual	Awareness about existence of K.V.K.		If 'yes' knowledge about its location		Awareness about services rendered by the K.V.K.	
			Yes	No	Yes	No	Yes	No
1	2	3	4	5	6	7	8	9
1.	Surajpur	28	28	0	28	0	28	0
2.	Minnora	57	57	0	57	0	57	0
3.	Charpua	24	24	0	24	0	24	0
	<b>Adopted Village</b>	109	109	0	109	0	109	0
4.	Sujanpura	7	7	0	7	0	7	0
5.	Papawani	47	47	0	47	0	47	0
6.	Bori	49	48	1	49	0	49	0
7.	Khiriya	30	30	0	30	0	30	0
8.	Ganesh Ganj	48	48	0	48	0	48	0
9.	Manikpura	50	50	0	50	0	50	0
	<b>Cluster Village</b>	231	230	1	231	0	231	0
	<b>Total</b>	340	339	1	340	0	340	0

9.217 The cent percent awareness about K.V.K. in terms of its location and more importantly the services rendered by it is undoubtedly an encouraging indication that indicates the fruitful efforts of K.V.K. scientists in their stride to popularise the functions of K.V.K.

## KNOWLEDGE ABOUT SPECIFIC SERVICES RENDERED BY K.V.K.

9.218 The table below shows the details;

Table No. 9.70  
Knowledge about Specific Services Rendered by the K.V.K.

S. No	Name of the Village	No. of Individual	Knowledge about vocational training		Knowledge about front line demonstration		Knowledge about on farm testing	
			Yes	No	Yes	No	Yes	No
1	2	3	4	5	6	7	8	9
1.	Surajpur	28	28	0	28	0	28	0
2.	Minnora	57	57	0	57	0	57	0
3.	Charpua	24	24	0	24	0	24	0
	<b>Adopted Village</b>	109	109	0	109	0	109	0
4.	Sujanpura	7	7	0	7	0	7	0
5.	Papawani	47	47	0	45	2	47	0
6.	Bori	49	49	0	49	0	49	0
7.	Khiriya	30	30	0	29	1	30	0
8.	Ganesh Ganj	48	48	0	48	0	48	0
9.	Manikpura	50	50	0	48	2	50	0
	<b>Cluster Village</b>	231	231	0	226	5	231	0
	<b>Total</b>	340	340	0	335	5	340	0

9.219 Regarding **Vocational Training** the cent percent awareness of the individuals from adopted and cluster villages seems obvious as participation of households in such training programmes is maximum.

9.220 Knowledge of 335 individuals [98.53 percent] about F.L.D. is encouraging that shows impact of the positive efforts of K.V.K. Scientists.

**9.221 Similarly cent percent awareness about O.F.T. is, somewhat, encouraging.**

### FIELD VISITS OF K.V.K. SCIENTISTS

9.222 Regular field visits by the K.V.K. scientists are necessary pre-requisites for implementation of agriculture related technology and also to keep alive the confidence level of the farming community. The table below shows the extent of such visits.



Table No. 9.71  
Field Visits of K.V.K. Scientists

S. No	Name of the Village	No. of Individual	The duration gap			
			One month	Two months	More than two months	Never
1	2	3	4	5	6	7
1.	Surajpur	28	0	0	0	28
2.	Minnora	57	2	0	0	55
3.	Charpua	24	0	0	0	24
	<b>Adopted Village</b>	109	2	0	0	107
4.	Sujanpura	7	0	0	0	7
5.	Papoura (Mondu Bhak)	47	5	0	0	42
6.	Bori	49	1	0	0	48
7.	Khiriya	30	2	1	0	27
8.	Ganesh Ganj	48	3	0	0	45
9.	Manikpura	50	4	2	0	44
	<b>Cluster Village</b>	231	15	3	0	213
	<b>Total</b>	340	17	3	0	320

9.223 Out of total of 340 individuals, cent percent persons have informed about irregular visits of K.V.K. scientists which seems rather an inflated information, which is contradicted by the fact of cent-percent awareness level of the farmers about services rendered by the K.V.K. The high degree of absence of K.V.K. scientists would have not lead to such type of positive results. May be the individuals might have vented out their regrets caused due to some other factors by informing about irregular visits by K.V.K. scientists. Even if half the information is taken to be correct, the picture remains to be grim. At least a fortnightly visit by K.V.K. scientists is necessary to keep-up the confidence level of the farmers. **The authorities of K.V.K., Tikamgarh may sort out this issue to avoid such regrets from farming communities for whom they work.**

#### THE STATUS OF REGULAR CONTACT WITH K.V.K.

9.224 The regular contact of the farmes with the K.V.K. is one of the determining factors for implementation of agriculture related technologies in the field. The table below shows the details;

Table No. 9.72  
Status of Regular Contact with K.V.K.

S. No	Name of the Village	No. of Individual	Are you regular touch with KVK		If yes reason			if 'no' the reason	
			Yes	No	For seed	Plant protection	New technology	Distance	Do not feel the necessity
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	28	26	2	2	2	24	2	0
2.	Minnora	57	55	2	0	2	55	2	0
3.	Charpua	24	24	0	0	0	24	0	0
	<b>Adopted Village</b>	109	105	4	2	4	103	4	
4.	Sujanpura	7	7	0	0	0	7	0	0
5.	Papawani	47	42	5	2	3	42	3	4
6.	Bori	49	48	1	1	0	29	0	0
7.	Khiriya	30	28	2	0	2	28	2	0
8.	Ganesh Ganj	48	45	3	2	1	45	1	0
9.	Manikpura	50	46	4	2	4	44	5	0
	<b>Cluster Village</b>	231	216	15	7	10	195	11	4
	<b>Total</b>	340	321	19	9	14	298	15	4

9.225 Out of total of 340 individuals, 321 individuals [94.41 percent] are in regular contact with K.V.K. mainly because of the desire for adopting new technology. A total number of 19 individuals are not in regular contact with K.V.K. which is 5.59 percent to total individuals. The main reason is the distance factor due to which such individuals can not keep a regular contact.

### STATUS OF IMPLEMENTATION OF THE SERVICES OF THE K.V.K.

9.226 The table below shows the details;

Table No. 9.73

#### Implementation of the Services of K.V.K.

S No	Name of the Village	No. of Individual	Implementation of the services of K.V.K.		If yes in what fields				
			Yes	No	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	28	26	2	28	0	0	0	0
2.	Minnora	57	57	0	53	0	0	0	0
3.	Charpua	24	24	0	24	0	0	0	0
	<b>Adopted Village</b>	109	107	2	105	0	0	0	0
4.	Sujanpura	7	7	0	7	0	0	0	0
5.	Papawani	47	45	2	46	0	0	0	0
6.	Bori	49	48	1	49	0	0	0	0
7.	Khiriya	30	30	0	28	2	0	0	0
8.	Ganesh Ganj	48	46	2	48	0	0	0	0
9.	Manikpura	50	50	0	50	0	0	0	0
	<b>Cluster Village</b>	231	226	5	228	2	0	0	0
	<b>Total</b>	340	333	7	233	2	0	0	0

Table No. 9.73 [Contd...]

#### Implementation of the Services of K.V.K

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Not satisfied with new technology	Problem of resources	Satisfied with present status
1	2	11	12	13	14	15	16	17	18
1.	Surajpur	19	0	0	0	0	0	0	0
2.	Minnora	18	0	7	0	1	0	0	0
3.	Charpua	13	0	0	0	0	0	0	0
	<b>Adopted Village</b>	50	0	7	0	1	0	0	0
4.	Sujanpura	7	0	0	0	0	0	7	0
5.	Papawani	8	0	0	0	0	0	0	0
6.	Bori	18	0	5	0	0	0	0	0
7.	Khiriya	14	0	0	0	0	0	0	0
8.	Ganesh Ganj	17	0	3	0	0	0	0	0
9.	Manikpura	0	0	2	0	0	0	0	0
	<b>Cluster Village</b>	64	0	10	0	0	0	7	0
	<b>Total</b>	114	0	17	0	1	0	7	0

9.227 The above table shows that out of 340 individuals, 333 individuals have implemented the services of K.V.K. which is 97.94 percent to total respondents. **This is an achievement by itself.** It is worth mentioning here that the figures of itemwise coverage will not tally with the figure of 333 as the same person from agronomy might have implemented the improved techniques in the fields of horticulture, animal husbandry, home science etc.

9.228 The subject wise coverage figures show that the highest number of 333 individuals [97.94 percent to total individuals] have implemented the improved techniques relating to agronomy followed by 114 individuals [33.53 percent] implementing the improved techniques relating to home science. **In subjects like animal husbandry, fishery, poultry, agro-forestry, watershed activities and training of rural youth no implementation efforts have been done by the sample individuals as for these activities even vocational trainings have hardly been organised. Intensive efforts are required in the fields like animal husbandry, agro-forestry and watershed activities as these fields have extensive scope for employment and income generation.**

9.229 Only 7 individuals from village Sujanpura [cluster village] have not implemented the services of K.V.K., mainly because of the problems of resources.

#### SATISFACTION LEVEL OF THE INDIVIDUALS ABOUT THE SERVICES OF K.V.K.

9.230 The level of satisfaction derived from the services of K.V.K. is important to sustain the efforts of K.V.K. over a period of time. The table below shows the details;

Table No. 9.74  
Satisfaction Level of the Individuals

S. No	Name of the Village	No. of Individual	Satisfied with the impact		If yes in what fields				
			Yes	No	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	28	28	0	28	0	0	0	0
2.	Minnora	57	56	1	55	0	0	0	0
3.	Charpua	24	24	0	24	0	0	0	0
	<b>Adopted Village</b>	109	108	1	107	0	0	0	0
4.	Sujanpura	7	7	0	7	0	0	0	0
5.	Papawani	47	46	1	46	0	0	0	0
6.	Bori	49	49	0	45	0	0	0	0
7.	Khiriya	30	30	0	28	2	0	0	0
8.	Ganesh Ganj	48	48	0	48	0	0	0	0
9.	Manikpura	50	50	0	50	0	0	0	0
	<b>Cluster Village</b>	231	230	1	224	2	0	0	0
	<b>Total</b>	340	338	2	331	2	0	0	0

Table No. 9.74 [Contd...]  
Satisfaction Level of the Individuals

S. No.	Name of the Village	If yes in what fields					If no the reason		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Techn-ique is difficult to follow	Inputs are not easily available	Non-availability of advice in the time
1	2	11	12	13	14	15	16	17	18
1.	Surajpur	17	0	2	0	0	0	0	0
2.	Minnora	17	0	6	0	0	0	0	0
3.	Charpua	13	0	0	0	0	0	0	0
	<b>Adopted Village</b>	47	0	8	0	0	0	0	0
4.	Sujanpura	7	0	0	0	0	0	0	0
5.	Papawani	8	0	0	0	0	0	2	0
6.	Bori	18	0	4	0	0	0	0	0
7.	Khiriya	13	0	0	0	0	0	0	0
8.	Ganesh Ganj	17	0	3	0	0	0	0	0
9.	Manikpura	0	0	2	0	0	0	0	0
	<b>Cluster Village</b>	63	0	9	0	0	0	2	0
	<b>Total</b>	110	0	17	0	0	0	2	0

9.231 The above table shows the 99.41 percent level of satisfaction of sample individuals for the services rendered by the K.V.K., which in itself is a startling achievement.

**9.232 Agronomy and Home Science are the subjects for which satisfaction level is substantial. In subjects like animal husbandry, fishery, poultry, agro-forestry, watershed activities and training of rural youth the satisfaction level is nil because of the basic fact that for these subjects no substantial number of vocational training has been initiated nor much of the FLDs or OFTs have been organised. Moreover, the cultivators of our sample area are not much interested in these activities, as they do not contribute substantially to their family income. However, efforts must be made to popularize the activities like animal husbandry, agro-forestry and watershed activities, as these subjects are important for rural economy.**

### IMPACT ON INCOME ENHANCEMENT

9.233 The validity of any effort is ultimately measured by its impact over income enhancement whether directly or indirectly. The table below shows the details;

Table No. 9.75  
Impact on Income Enhancement

S. No.	Name of the Village	No. of Individual	Income enhancement		If yes the fields				
			Yes	No	Agronomy	Horticulture	Animal husbandry	Fisheries	Poultry
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	28	28	0	28	0	0	0	0
2.	Minnora	57	57	0	55	0	0	0	0
3.	Charpua	24	24	0	23	0	0	0	0
	<b>Adopted Village</b>	109	109	0	106	0	0	0	0
4.	Sujanpura	7	7	0	7	0	0	0	0
5.	Papawani	47	46	1	44	0	0	0	0
6.	Bori	49	49	0	44	0	0	0	0
7.	Khiriya	30	30	0	24	2	0	0	0
8.	Ganesh Ganj	48	48	0	45	0	0	0	0
9.	Manikpura	50	50	0	48	0	0	0	0
	<b>Cluster Village</b>	231	230	1	212	2	0	0	0
	<b>Total</b>	340	339	1	318	2	0	0	0

Table No. 9.75 [Contd...]  
Impact on Income Enhancement

S. No.	Name of the Village						If no the reasons		
		Home science	Agro forestry	Organic farming	Water shed	Training of rural youth	Could not follow the instruction	Problem of resource	Non- availability technical advice in time
1	2	11	12	13	14	15	16	17	18
1.	Surajpur	17	0	2	0	0	0	0	0
2.	Minnora	17	0	4	0	0	0	0	0
3.	Charpua	13	0	0	0	0	0	0	0
	<b>Adopted Village</b>	47	0	6	0	0	0	0	0
4.	Sujanpura	7	0	0	0	0	0	0	0
5.	Papawani	6	2	0	0	0	0	0	0
6.	Bori	18	0	4	0	0	0	0	0
7.	Khiriya	11	0	0	0	0	0	0	0
8.	Ganesh Ganj	17	0	3	0	0	0	0	0
9.	Manikpura	0	0	2	0	0	0	0	0
	<b>Cluster Village</b>	59	2	9	0	0	0	0	0
	<b>Total</b>	106	2	15	0	0	0	0	0

- 9.234 From the above table 99.71 percent positive response regarding impact of K.V.K. services over income enhancement is visualized which is creditable to the efforts of the K.V.K. in various fields of its operation.
- 9.235 As is expected, maximum number of 318 individuals i.e. 93.53 percent to total of 340 individuals have expressed the positive impact on income enhancement through practice of agronomy followed by home science [106 individuals].

#### EXTENT OF INCOME ENHANCEMENT

- 9.236 Assessment of income level of individuals is one of the most difficult aspects of primary data collection as the persons are usually shy of giving the correct information. However, through indirect approach, information regarding income has been collected which is given in the following table;

Table No. 9.76  
Extent of Income Enhancement

S. No	Name of the Village	Percentage increase in Income								
		1 to 10 %	11 to 20%	21 to 30%	31 to 50%	51 to 60%	61 to 70%	71 to 80%	81 to 90%	91 to 100%
1	2	3	4	5	6	7	8	9	10	11
1.	Surajpur	28	0	5	0	0	0	0	0	0
2.	Minnora	51	6	5	0	0	0	0	0	0
3.	Charpua	24	0	0	0	0	0	0	0	0
	<b>Adopted Village</b>	103	6	10	0	0	0	0	0	0
4.	Sujanpura	7	0	0	0	0	0	0	0	0
5.	Papoura (Mondu Bhak)	46	0	0	0	0	0	0	0	0
6.	Bori	46	0	0	0	0	0	0	0	0
7.	Khiriya	19	9	0	0	0	0	0	0	0
8.	Ganesh Ganj	36	10	0	0	0	0	0	0	0
9.	Manikpura	44	4	0	0	0	0	0	0	0
	<b>Cluster Village</b>	198	23	0	0	0	0	0	0	0
	<b>Total</b>	301	29	10	0	0	0	0	0	0

- 9.237 The above table shows that out of 340 individuals, 301 individuals [88.53 percent to total individuals] have reported about 9 to 10 percent enhancement in income due to the impact of various services of K.V.K. while 39 individuals [11.47 percent] reported about 11 to 30 percent income enhancement. **The impact of the K.V.Ks. efforts over income enhancement is, somewhat, stratling.**

#### OPINION ABOUT CONTINUANCE OF THE SERVICES OF K.V.K.

- 9.238 The table below shows the details;

Table No. 9.77  
Opinion about Continuance of K.V.K. Services

S. No.	Name of the Village	No. of Individual	Continuation of the services of K.V.K.	
			Yes	No
1	2	3	4	5
1.	Surajpur	28	28	0
2.	Minnora	57	57	0
3.	Charpua	24	24	0
	<b>Adopted Village</b>	109	109	0
4.	Sujanpura	7	7	0
5.	Papawani	47	46	1
6.	Bori	49	49	0
7.	Khiriya	30	30	0
8.	Ganesh Ganj	48	48	0
9.	Manikpura	50	50	0
	<b>Cluster Village</b>	231	230	1
	<b>Total</b>	340	339	1

9.239 The above table shows that out of 340 individuals, 339 individuals [99.71 percent to total individuals] have reported for continuance of the services by K.V.K. particularly for subjects like home science and agronomy, agro-forestry and organic farming. Only 1 number of individuals have given negative opinion which seems natural in the context of large number of respondents. **Viewing things from the positive angle, the performance of the K.V.K. seems laudable, as the efforts have won the confidence of the farming community of our area of study.**

#### **SUGGESTIONS FOR ADDITIONAL SERVICES TO BE RENDERED BY THE K.V.K.**

9.240 Information regarding suggestions for additional services to be rendered by the K.V.K. has been collected from the individuals. The table below shows the details;

Table No. 9.78  
Suggestions for Additional Services to be Rendered by K.V.K.

S. No.	Name of the Village	No. of Individual	Suggestions for additional services by KVK			
			Production of by product	Marketing strategy	Weather forecasting	Availability of agri. inputs at panchayat level
1	2	3	4	5	6	7
1.	Surajpur	28	15	7	0	4
2.	Minnora	57	20	23	2	12
3.	Charpua	24	11	5	0	8
	<b>Adopted Village</b>	109	46	35	2	24
4.	Sujanpura	7	1	6	0	0
5.	Papawani	47	15	11	0	18
6.	Bori	49	24	19	0	6
7.	Khiriya	30	14	8	3	5
8.	Ganesh Ganj	48	22	21	1	4
9.	Manikpura	50	15	22	2	11
	<b>Cluster Village</b>	231	91	87	6	44
	<b>Total</b>	340	137	122	8	68

- 9.241 Out of 340 individuals 335 individuals [98.53 percent] have given their useful suggestions about introduction of additional services to be rendered by the K.V.K. Important among these are regarding suggestions about **production of by-product of crops, development of marketing strategy for fair return of the product and making available agricultural inputs at Gram Panchayat Level** wherein 127, 122 and 68 individuals respectively have given their useful suggestions.
- 9.242 Regarding production of by-product, that may lead to some processing activities, the work may be initiated in liaison with Industries Department of the district.
- 9.243 Marketing of agriculture produce is gaining importance to avoid the exploitation of farmers by brokers. The intervention of K.V.K. personnel will be very useful if some sort of training is organised for beneficiary cultivators in liaison with Mandi Committees.
- 9.244 Regarding availability of agriculture inputs at Gram Panchayat level, the K.V.K Scientists may bring home the solution in consultation with the Chief Executive Officer of Zila Panchayat by developing modalities for making available things at Gram Panchayat level.
- 9.245 It is, therefore, worth considering to incorporate in the mandate of K.V.K. the subjects like production of by-products and development of marketing strategy of the product of the cultivators.**

#### UTILIZATION OF THE ENHANCED INCOME

- 9.246 Proper utilization of enhanced income is equally important as compared to its generation. The table below shows the utilization of enhanced income of sample individuals for purchase of various agriculture inputs;

Table No. 9.79  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Enhanced income led to purchase of					
			Tractor		Harvester		Thresher	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	4	5	6	7	8	9
1.	Surajpur	28	0	28	0	28	0	28
2.	Minnora	57	0	57	0	57	0	57
3.	Charpua	24	0	24	3	21	0	24
	<b>Adopted Village</b>	109	0	109	3	106	0	109
4.	Sujanpura	7	0	7	0	7	1	6
5.	Papawani	47	0	47	0	47	0	47
6.	Bori	49	0	49	0	49	1	48
7.	Khiriya	30	0	30	0	30	7	23
8.	Ganesh Ganj	48	0	48	0	48	2	46
9.	Manikpura	50	0	50	0	50	0	50
	<b>Cluster Village</b>	231	0	231	0	231	11	220
	<b>Total</b>	340	0	340	3	337	11	329

Table No. 9.79 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual						
			Plough		Seed drill		Bullock pair	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	10	11	12	13	14	15
1.	Surajpur	28	0	28	0	28	5	23
2.	Minnora	57	31	26	0	57	5	52
3.	Charpua	24	8	16	0	24	3	21
	<b>Adopted Village</b>	109	39	70	0	109	13	96
4.	Sujanpura	7	3	4	0	7	0	7
5.	Papawani	47	5	42	0	47	9	38
6.	Bori	49	7	42	0	49	6	43
7.	Khiriya	30	21	9	0	30	2	28
8.	Ganesh Ganj	48	25	23	0	48	5	43
9.	Manikpura	50	16	34	0	50	9	41
	<b>Cluster Village</b>	231	77	154	0	231	31	200
	<b>Total</b>	340	116	224	0	340	44	296

Table No. 9.79 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual						
			Power/Knapsac sprayer		Handhoe		Storage facility	
			Yes (1)	No (2)	Yes (1)	No (2)	Yes (1)	No (2)
1	2	3	16	17	18	19	20	21
1.	Surajpur	28	0	28	0	28	0	28
2.	Minnora	57	0	57	5	52	0	57
3.	Charpua	24	0	24	4	20	0	24
	<b>Adopted Village</b>	109	0	109	9	100	0	109
4.	Sujanpura	7	0	7	0	7	0	7
5.	Papawani	47	0	47	1	46	0	47
6.	Bori	49	0	49	1	48	0	49
7.	Khiriya	30	0	30	6	24	0	30
8.	Ganesh Ganj	48	0	48	8	40	0	48
9.	Manikpura	50	4	46	9	41	0	50
	<b>Cluster Village</b>	231	4	227	25	206	0	231
	<b>Total</b>	340	4	336	34	306	0	340



Table No. 9.79 [Contd...]  
Utilization of Enhanced Income

S. No.	Name of the Village	No. of Individual	Tube well /Dug well		Electric/diesel motor	
			Yes (1)	No (2)	Yes (1)	No (2)
			22	23	24	25
1.	Surajpur	28	0	28	1	27
2.	Minnora	57	0	57	4	53
3.	Charpua	24	0	24	0	24
	<b>Adopted Village</b>	109	0	109	5	104
4.	Sujanpura	7	0	7	0	7
5.	Papawani	47	0	47	0	47
6.	Bori	49	0	49	1	48
7.	Khiriya	30	0	30	2	28
8.	Ganesh Ganj	48	0	48	2	46
9.	Manikpura	50	0	50	4	46
	<b>Cluster Village</b>	231	0	231	9	222
	<b>Total</b>	340	0	340	14	326

9.247 The above table shows that 226 individuals have utilized their enhanced income for purchase of various agriculture inputs which constitutes 66.47 percent to total number of 340 sample individuals. The purchases are mainly limited on items like harvester, thresher, plough, bullock pairs and power knapsac sprayer and hand hoe. The utilization level of enhanced income for purchase of agriculture input is quite impressive.

#### IMPACT OF ENHANCED INCOME OVER EDUCATION LEVELS

9.248 The table below shows the impact of enhanced income over levels of education in our area of study;

Table No. 9.80  
Impact of Enhanced Income Over Levels of Education

S. No.	Name of the Village	No. of Individual	Impact on education due to enhanced income		If yes in what manner				
			Yes (1)	No (2)	More Male Children go to primary/middle (1)	More Female Children go to primary/middle (2)	More male children attend secondary level education (3)	More female children attend secondary level education (4)	Male Female children go for higher education non (5)
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	28	22	6	16	5	0	0	0
2.	Minnora	34	32	2	16	9	5	0	2
3.	Charpua	47	37	10	14	4	8	3	0
	<b>Adopted Village</b>	109	91	18	46	18	13	3	2
4.	Sujanpura	7	7	0	4	0	0	0	0
5.	Papawani	47	40	7	21	12	0	0	0
6.	Bori	49	43	6	31	9	0	0	0
7.	Khiriya	30	29	1	20	4	3	2	0
8.	Ganesh Ganj	47	45	2	22	13	6	4	0
9.	Manikpura	51	47	4	27	14	3	2	1
	<b>Cluster Village</b>	231	211	20	125	52	12	8	1
	<b>Total</b>	340	302	38	171	70	25	11	3

Table No. 9.80 [Contd...]  
Impact of Enhanced Income Over Levels of Education

S. No	Name of the Village	No. of Individual	If no the reasons						
			Educa- tion is no priority (1)	Purchase of agr. inputs (2)	Exp. on religious /social rituals (3)	Purchase of luxutry items like TV fridge two wheeler etc. (4)	Consump- tion of intoxicants (5)	Deposi- ted in the bank (6)	Debt repay- ment (7)
1	2	3	11	12	13	14	15	16	17
1.	Surajpur	28	0	4	0	0	0	0	0
2.	Minnora	34	4	0	0	0	0	0	0
3.	Charpua	47	8	0	0	0	0	0	0
	<b>Adopted Village</b>	109	12	4	0	0	0	0	0
4.	Sujanpura	7	0	1	0	0	0	0	0
5.	Papawani	47	5	4	0	0	0	0	0
6.	Bori	49	0	7	0	0	0	0	0
7.	Khiriya	30	1	0	0	0	0	0	0
8.	Ganesh Ganj	47	0	0	0	0	0	0	0
9.	Manikpura	51	4	0	0	0	0	0	0
	<b>Cluster Village</b>	231	10	12	0	0	0	0	0
	<b>Total</b>	340	22	16	0	0	0	0	0

9.249 Out of 340 individuals, 279 individuals [82.06 percent] have reported positive impact of enhanced income over levels of education while 38 number of individuals [11.18 percent] have refused about such impact. The positive impact is predominant in case of primary and middle level education for both boys and girls wherein 241 individuals [70.88 percent to total individuals] have reported that due to enhanced income more number of boys and girls are being sent to attend elementary level [primary + middle] of education. The positive impact of enhanced income on levels of education shows the awareness of the sample individuals about value of education.

9.250 Regarding negative responses by 38 individuals, 22 individuals [6.47 percent to total of 340 individuals] have reported that education is no priority to them while 16 individuals [4.71 percent] have said that due to purchase of agriculture inputs the emphases on education has been reduced.

#### IMPACT OF ENHANCED INCOME OVER HEALTH STATUS

9.251 Health is again an important social factor that accounts for efficiency in pursuance of any occupation. The table below shows the impact of enhanced income over health status of sample population.

Table No. 9.81  
Impact of Enhanced Income over Health Conditions

S. No.	Name of the Village	No. of Individual	Impact on Health		If yes in what manner				
			Yes (1)	No (2)	Services of medical personnel (1)	Vaccination of children/women done (2)	Child nutrition (3)	Female nutrition during gestation (4)	Adoption of Family welfare measures
1	2	3	4	5	6	7	8	9	10
1.	Surajpur	28	28	0	9	14	2	3	0
2.	Minnora	34	29	5	1	13	6	2	7
3.	Charpua	47	47	0	28	15	3	0	0
	<b>Adopted Village</b>	109	104	5	38	42	11	5	7
4.	Sujanpura	7	7	0	1	5	0	0	1
5.	Papawani	47	44	3	16	19	11	0	0
6.	Bori	49	48	1	8	36	5	0	0
7.	Khiriya	30	28	2	2	14	5	0	7
8.	Ganesh Ganj	47	33	14	3	10	11	3	3
9.	Manikpura	51	42	9	10	20	2	1	10
	<b>Cluster Village</b>	231	202	29	40	104	34	4	21
	<b>Total</b>	340	306	34	78	146	45	9	28

Table No. 9.81 [Contd...]  
Impact of Enhanced Income over Health Conditions

S. No	Name of the Village	No. of Individual	If no the reasons						
			Health is no priority	Believe in local healing methods	Purchase of agri. inputs	Exp. on religious functions	Luxury items TV Fridge, Two wheeler, Four wheeler	Consumption of intoxicants	Deposited in bank
1	2	3	11	12	13	14	15	16	17
1.	Surajpur	28	0	0	0	0	0	0	0
2.	Minnora	34	3	1	0	0	0	0	0
3.	Charpua	47	0	0	0	0	0	0	0
	<b>Adopted Village</b>	109	3	1	0	0	0	0	0
4.	Sujanpura	7	0	0	0	0	0	0	0
5.	Papawani	47	0	0	0	0	0	0	0
6.	Bori	49	0	0	0	0	0	0	0
7.	Khiriya	30	2	0	0	0	0	0	0
8.	Ganesh Ganj	47	13	8	0	0	0	0	0
9.	Manikpura	51	7	0	0	0	0	0	0
	<b>Cluster Village</b>	231	22	8	0	0	0	0	0
	<b>Total</b>	340	25	9	0	0	0	0	0

9.252 The above table shows that out of 340 individuals, 306 individuals [90.00 percent to total of 340 individuals] have reported about positive impact of enhanced income over health status which shows the awareness of the sample population about value of keeping good health. The items of positive responses like hiring of the services of medical personnel [78 individuals], vaccination of children/women [146 individuals]. Child nutrition [45 individuals] female nutrition during gestation [9 individuals] and adoption of family welfare measures [28 individuals] are indicative of healthy trend since the individuals are more concerned particularly about, the health status of women and children.

9.253 Though the number of individuals with negative response is only 34 [10.00 percent to total of 340 individuals] but the opinion like health is no priority by 25 number of individuals is a sort of red alert to K.V.K. scientists who must uproot such attitude lest they go deep into the thinking of more individuals.

#### IMPACT OF ENHANCED INCOME OVER POTABLE DRINKING WATER SUPPLY

9.254 The table below shows the details;

Table No. 9.82  
Impact of Enhanced Income over Potable Drinking Water Supply

S. No	Name of the Village	No. of Individual	Improvement in potable drinking water	
			Yes	No
1	2	3	4	5
1.	Surajpur	28	2	26
2.	Minnora	34	0	34
3.	Charpua	47	8	39
	<b>Adopted Village</b>	109	10	99
4.	Sujanpura	7	0	7
5.	Papawani	47	1	46
6.	Bori	49	7	42
7.	Khiriya	30	2	28
8.	Ganesh Ganj	47	0	47
9.	Manikpura	51	0	51
	<b>Cluster Village</b>	231	10	221
	<b>Total</b>	340	20	320

9.255 The above table shows a reverse situation where the negative response is to the tune of 320 individuals which is 94.12 percent to total of 340 individuals while the positive response is by only 20 individuals [5.88 percent]. These facts show that availability of potable drinking water is no priority in rural areas. The majority of positive respondents have indicated the spending of portion of enhanced income over installation of hand pumps. **The solution to this problem of neglect of potable drinking water lies in enhancement of agricultural income of the rural population which if achieved will solve the problem of drinking water and also sanitation as the enhanced income induces the individuals to take care of the finer details of life.**

#### IMPACT OF ENHANCED INCOME OVER HOUSING CONDITIONS

9.256 The table below shows the details;

Table No. 9.83  
Impact of Enhanced Income over Housing Conditions

S. No	Name of the Village	No. of Individual	Enhancement in income resulted in improved housing contentions	
			Yes	No
1	2	3	4	5
1.	Surajpur	28	18	10
2.	Minnora	34	12	22
3.	Charpua	47	19	28
	<b>Adopted Village</b>	109	49	60
4.	Sujanpura	7	1	6
5.	Papawani	47	8	39
6.	Bori	49	22	27
7.	Khiriya	30	11	19
8.	Ganesh Ganj	47	10	37
9.	Manikpura	51	4	47
	<b>Cluster Village</b>	231	56	175
	<b>Total</b>	340	105	235

9.257 The above table shows that out of 340 individuals, 105 individuals [30.88 percent] have positive responses while 235 individuals [69.12 percent] have refused spending of any amount of enhanced income over improving the housing conditions. The status seems obvious as frequent expenditure over improving the housing condition is not usually done.

#### **AWARENESS ABOUT WELFARE SCHEMES INITIATED BY THE STATE GOVERNMENT WITH ASSISTANCE FROM GOVERNMENT OF INDIA**

9.258 The basic objectives of various welfare schemes initiated by the government are providing employment opportunities to the target group for augmentation of income thereby improving the quality of life of the individuals/community. Though this information has no direct relevance to the functioning of K.V.K., but its personnel are supposed to popularize such schemes among villagers for taking financial support from such programmes. In the following paragraphs the details of a few important schemes have been given which have direct impact over the livelihoods of sample population.

#### **JAWAHAR GRAM SAMRIDHI YOJANA**

9.259 The former scheme of Jawahar Rojgar Yojna renamed as Jawahar Gram Samridhi Yojna was started from the year 1999-2000 with the basic objective of creating community assets of permanent nature, thereby providing employment to local labour. The survey results show that out of 340 individuals 161 individuals [47.35 percent] are aware of the scheme while rest of 179 individuals [52.65 percent] have no knowledge about the scheme. The scheme is important from the view point of creating community asset that results in availability of employment opportunities. Awareness about this scheme will induce the villagers to assert their demand through Gram Panchayat to develop their area. The K.V.K. personnel may, during their field visits, publicize the utility of the scheme among the villagers.

#### **EMPLOYMENT ASSURANCE SCHEME**

9.260 Started from the year 1997-98, the scheme aims at providing employment to rural population during lean season of agriculture thereby creating community assets. **The response to this scheme is somewhat encouraging as 132 individuals [38.82 percent] are aware about the scheme.**

#### **ESTABLISHMENT OF HAND LOOM UNITS**

9.261 Under this scheme, the units having 5 to 10 looms are registered and loom-shed subsidy and margin money subsidy are given. **Only 20 person of our sample area is aware of the scheme which is 5.88 percent to total 340 individuals. When much awareness is not there, there can hardly be any possibility of its implementation in our area of study.**

#### **ESTABLISHMENT OF SERICULTURE UNITS**

9.262 Under this scheme the beneficiaries are given training on various aspects of sericulture activities to supplement their income. For this purpose Resham Kendras spread over in districts assume nodal responsibilities to train the beneficiaries and augment their infrastructure. **Only 16 individuals from our area of study are aware of the existence of such scheme [what to say of its implementation] when the scheme is so important for rural economy. The K.V.K. personnel in liaison with concerned district authorities may take-up a campaign for making villagers aware about the benefits of the scheme.**

#### **ESTABLISHMENT OF FAMILY BASED RURAL INDUSTRIAL UNITS**

9.263 The scheme is implemented by the Madya Pradesh Khadi and Gramodoyog Board. Under this scheme the units pertaining to SC, ST and OBCs are given 90 percent subsidy on capital loan and remaining 10 percent loan is given by the banks. The level of awareness about this scheme is 21 individuals [6.18 percent to total of 340 individuals].

#### **MID DAY MEALS**

9.264 The programme has proved to be an effective incentive for retention of school going children relating to primary education, specially the children coming from low income group. Under this programme, cooked meals are provided to the school going children. **The level of awareness of this scheme is encouraging as 321 individuals, which is 91.41 percent to total of 340 individuals, are aware about this scheme.**

#### **FREE SUPPLY OF TEXT BOOKS**

9.265 Under this scheme all the students of primary standard [classes 1<sup>st</sup> to 5<sup>th</sup>] belonging to SC, ST and OBCs and students of classes 1<sup>st</sup> to 3<sup>rd</sup> standards belonging to general communities are given text books free of cost. As per our survey results 208 individuals [61.18 percent] are aware about the scheme while 132 individuals [38.82 percent] are not aware of the scheme. **Since the supply of text books free of cost is mandatory, the individuals unaware of the scheme are either persons having their wards above primary standards of education or the rate of drop-out is so high that they are not particular about the scheme. However, efforts both by persons of school education department and K.V.K. may reduce such extent of unawareness.**

#### **WOMEN SELF HELP GROUP**

9.266 With view to ensure social and economic empowerment of women, self help groups [S.H.Gs.] are formed for making the women confident to face challenges on all fronts, be it social or economic. In this scheme, the members of the group deposit a part of their saving in the fund raised by the group and may take loan to meet their various social and economic obligations, subject to return of the amount with interest. In our area of study 282 individuals [82.84 percent] are aware of this scheme which, ofcourse, is very encouraging that indicates the awareness of individuals about the value of such institution. Unawareness aspect for 58 individuals may easily be overcome by little more extension efforts by concerned government officials and persons of K.V.K.

#### **GRAMYA YOJNA**

9.267 Under this scheme the poor women are given interest free loan upto Rs. 500.00 towards starting a small business. After repayment of the first loan within one year, second loan to the tune of Rs. 1500.00 is given. In our area of study, 211 number of individuals [62.06 percent] are aware of this scheme **which is satisfactory.**

#### **AUSMATI YOJNA**

9.268 With the objective of providing better medical assistance to the women belonging to the families living below the poverty line in rural areas, this scheme was started in the year 1999. **For this scheme also the extent of awareness by 209 individuals [61.07 percent] is quite satisfactory.**

**9.269 In what follows an attempt has been made to summarise the details of individual particulars of adopted and cluster villages.**

- **The frame of the present part of the narration is 340 individuals which is 25 percent of the family members of 25 percent sample households belonging to adopted and cluster villages.**
- **The criteria for selection of individuals are – the persons should be the adult member of the family, he/she should be associated with any programme of the K.V.K., he/she should be literate – may be without having any formal education.**
- **The majority of 269 individuals are from S.C. and O.B.C. communities accounting for 79.12 percent to total of 340 individuals from adopted and cluster villages.**
- **The cent-percent sample individuals from our area of study are the followers of Hindu religion.**
- **The cent-percent awareness of the individuals about the K.V.K. in terms of its location and more importantly the services rendered by it is an important achievement of the K.V.K.**
- **Regarding knowledge about specific services, cent-percent sample individuals are aware of the vocational training while 98.53 percent individuals are aware of F.L.D. and cent percent individuals know about O.F.T. The impact of the K.V.K. services are obvious.**
- **Out of total of 340 individuals, 321 individuals [94.41 percent] are in regular contact with K.V.K. mainly because of the desire for adopting new technology.**
- **Regarding implementation, 97.94 percent individuals have implemented the services of K.V.K. This is an achievement by it self.**
- **Except for the subjects like agronomy and home science where 97.94 percent and 33.53 percent individuals have implemented the services rendered by K.V.K., in rest of the subjects viz. animal husbandry, fishery, poultry, agro-forestry, watershed activities and training of rural youth no implementation efforts have been done by the sample individuals.**
- **Agronomy and the home science are the subjects for which satisfaction level is substantial. In subjects like animal husbandry, poultry, fishery, watershed activities and training of rural youth the satisfaction level is nil.**
- **Regarding impact of K.V.K's. efforts over income enhancement, cent percent individuals have given positive response which is an achievement in itself.**
- **Regarding continuance of the services of K.V.K. 99.71 percent individuals have given positive response that justifies the laudable performance of the K.V.K.**
- **It is worth considering to incorporate in the mandate of the K.V.K. the new subjects like production of by-products and marketing strategy of the product.**
- **As regards utilization of enhanced income, 66.47 percent individuals have spent their enhanced income over purchase of agriculture implements.**

- Regarding impact of enhanced income over levels of education, 82.06 percent individuals have given positive response particularly in case of elementary education for both boys and girls, which, no doubt is an encouraging trend.
- 90.00 percent to total of 340 individuals have reported about positive impact of enhanced income over health status that shows the awareness of sample population about value of keeping good health.

#### RESULTS OF SURVEY–INDIVIDUAL PARTICULARS–CONTROL VILLAGE

- 9.270 In the following paragraphs an attempt has been made to record the reactions of 25 percent of individuals taken from control village of Neemkhera where there is no intervention of KVK. The Total number of family members of the 25 percent of the households in village is 68, the twenty five percent of which is 16 individuals. Therefore, the reactions of 16 number of individuals have been recorded to have a comparison with the reactions of individuals of adopted and cluster villages having direct intervention of KVK. The criteria for selection of individuals for control village are similar to that for adopted and cluster villages.
- 9.271 All the 16 individuals are from O.B.C. community. Non of the persons are from S.C., S.T. and General Community. Cent-percent individuals are followers of Hindu religion.
- 9.272 Regarding awareness about the **existence of KVK, 9** number of individuals [56.25 percent] of **Neemkhera village are aware of the its existence against the cent-percent awareness about K.V.K. in-terms of its location and services rendered by it by the individuals of adopted and cluster villages which seems obvious as in such cases the interventiojn of K.V.K. is direct.** Awareness is the basic paramter that leads to positive impact of any activity over a long period of time. **The ultimate aim of any K.V.K. is to cover the entire district in terms of implementation of prevailing and new technology relating to agriculture and its allied activities that presupposes awareness about this organisation by the farming community of the district. For this purpose the K.V.K. personnel of district Tikamgarh may organize meetings at Gram Panchayat level at least twice in a year inviting one representative from villages where there is no intervention of K.V.K. to make them aware about the utility of services rendered by the K.V.K.**
- 9.273 Regarding satisfaction derived from per hectare yield of agronomical and horticulture crops, 12 number of individuals 75.00 percent of control village Neemkhera have expressed their satisfaction while for adopted and cluster villages this satisfaction level is 99.41 percent to total of 340 individuals. However for improving the per-hectare yield, 2 number of individuals from control village which is 12.5 percent to total of 16 individuals have suggested for organizing training for application of inputs, followed by 1 individuals each for organizing training on water consrvation, crop rotation and organic farming.
- 9.274 Regarding satisfaction level of livestock and dairy activities 10 number of individuals [62.50 percent] have expressed their satisfaction. **The suggestions forwarded** are making available the improved breed production facilities by 1 individuals [6.25 percent] followed by training on artificial insemination by 5 individuals [31.25 percent] and one individual [6.25 percent] has opined for making available the improved feed facilities. **It will be worth mentioning that even in cases of adopted and cluster villages the satisfaction level for livestock and poultry activities is negligible.**
- 9.275 As for poultry development 8 number of individuals [50.00 percent] have expressed satisfaction. **The important suggestion** forwarded is arrangement of improved breeding facilities by 2 individual [12.50 percent], broiler production facilities [3 individuals] improved caging facilities [2 individuals] and improved feed management [1individuals]. **In case of adopted and cluster villages also the satisfaction level for this activity is not substantial.**



- 9.276 Regarding fishery development, again the level of dissatisfaction is cent-percent **supported by the suggestions** like supply of improved feed by 7 individuals [43.75 percent] followed by arranging training about use of improved implements by 2 individuals [12.50 percent] **It is worth mentioning** again that for adopted and cluster villages the level of satisfaction for this activity is nil.
- 9.277 Important information has been collected about adoption of home science activities for augmentation of family income. **Toy making** is one such activity where 2 number of individuals have asked for training facility followed by **pickle preparation** by 1 individuals [6.25 percent]. **Training regarding baking activities** have been supported by 1 individuals [6.25 percent], followed by papad/bari/jam/jelly by 1 individuals [6.25 percent] and food processing by 2 pesons [12.50 percent]. It is worth mentioning that in case of adopted and cluster villages the positive response in favour of home science activities is substantial.
- 9.278 Regarding training of rural youth for self employment, 7 number of individuals have **suggested** for organizing training programme for **motor binding** which is very relevant for performing agricultural activities followed by 4 individuals in favour of training courses for repair of **cycle scooter** that accounts for 25.00 percent to total of 16 sample individuals. For activities like **black smithy, carpentry and masonry**, individuals to the tune of 1 [6.25 percent], 3 [18.75 percent], 1 [6.25 percent], respectively have suggested for organizing training courses. It will not be out of place to mention here that in case of adopted and cluster villages, no individual has shown any inclination for such activities regarding training of rural youth.
- 9.279 Regarding educational status of the sample individuals of control village, the survey results show that out of 16 individuals, 9 persons [56.25 percent] have reported positively about their male children attending the **elementary level of education** [primary + middle i.e. classes 1<sup>st</sup> to 8<sup>th</sup> standards] while the response from 7 individuals [43.75 percent] for this item is negative. More or less similar is the situation with girls wherein 5 number of individuals [31.25 percent] have given positive response while 11 number of individuals [68.75 percent] were negative in their responses. Similarly regarding boys and girls students of **secondary level of education**, i.e. from from classes 9<sup>th</sup> to 12<sup>th</sup> the 2 and 8 individuals respectively have given positive response.
- 9.280 Regarding health status, the following table presents a comparative picture between adopted and cluster villages on one side and the control village on the other;

Table No. 9.84

Comparative Status of Health Facilities Among Sample Individuals

Sl. No.	Item	Status of control village – percentage to total 16 sample individuals	Status of adopted and cluster villages percentage to 113 sample individuals
1	Hiring of services of medical personnel	25.00	22.94
2	Vaccination of children/ pregnant mother	43.75	42.94
3	Child nutrition	56.25	13.24
4	Female nutrition during gestation period	62.50	2.65
5	Adoption of family welfare measures	37.50	8.24

**Note – Only positive responses have been taken into account.**

9.281 **In all the health parameters the percentage positive responses of the individuals of control village are higher than that of adopted and cluster villages that shows the relatively higher level of awareness among the sample individuals of control village regarding various health parameters as compared to adopted and cluster villages.**

9.282 Regarding status of drinking water facilities, cent percent individuals have responded positively about availability of hand pumps as main source of drinking water. Piped water supply is not in existence in the sample village which seems obvious as in villages in general this facility is seldom available. **In case of adopted and cluster villages also the majority of respondents have informed about hand pums as main source of drinking water in their villages.**

9.283 The table below shows the comparative level of awareness about the various welfare schemes between adopted/cluster villages and control village;

Table No. 9.85  
Comparative Levels of Awareness

Sl. No.	Name of the Scheme	Level of awareness in percentage for adopted/cluster villages [percent to total of 340 individuals]	Level of awareness in percentage for control village [percent to total of 16 individuals]
1	Jawahar Gram Samridhi Yojna	47.35	43.75
2	Employment Assurance Scheme	38.82	68.75
3	Establishment of Hand Loom Units	5.88	12.50
4	Establishment of Sericulture Units	4.71	-
5	Establishment of family based rural industrial Units	6.18	-
6	Mid-day Meals	91.41	93.75
7	Free supply of Text Books	61.18	31.25
8	Women Self Help Group	82.84	81.25
9	Gramya Yojna	61.06	56.25
10	Ausmati Yojna	61.47	75.00

9.284 **The above table shows that except for schemes like Employment Assurance Scheme and Mid-day meals, Establishment of hand loom units and ausmati yojna the level of awareness about other schemes is higher in adopted/cluster villages as compared to control village. Regarding schemes like Establishment of Sericulture Units and Establishment of family based rural industrial Units the level of awareness among individuals of control village is nil while that for adopted and cluster villages the level of awareness is marginal. The validity of such schemes, therefore, is doubtful as since the awareness about these schemes are missing, the plight of their implementation may well be imagined.**

9.285 **In what follows an attempt has been made to summarise the findings of individual particulars of the control village;**

- **The cent percent individuals are from O.B.C. community. Cent percent individuals are followers of Hindu religion**
- **Regarding awareness about existence of K.V.K. 56.25 percent individuals are aware of its existence.**
- **Regarding satisfaction derived from per hectare yield of agronomical and horticulture crops the 75.00 percent individuals from control village have expressed their satisfaction.**

- **Regarding satisfaction level for activities like livestock and dairy and poultry 62.50 percent and 50.00 percent individuals have expressed their satisfaction. For fishery development the dissatisfaction level is cent percent.**
- **Regarding home science activities the positive response from individuals of control village is substantial.**
- **Similarly for training of rural youth the positive response of the individuals of control village is substantial.**
- **Regarding educational status 56.25 percent individuals have reported positively about their male children attenditng the elementary level of education. More or less similar is the situation for girls wherein 31.25 percent individuals have given positive response.**
- **Regarding healthstatus the positive response from individuals is substantial.**
- **Regarding status of drinking water facilities cent percent individuals have responded positively about availability of hand pumps as main source of drinking water.**
- **As regards awareness about various welfare schemes the level of awareness for schemes like Jawahar gram Samridhi Yojna, Employment Assurance Scheme, Mid-day Meals, Women Self Help Group and Ausmati Yojana is substantial.**

## Chapter Ten

### The Wrap-up

10.1 This presentation has been necessitated due to large volume of the report dealing with six K.V.Ks. covering multiple of agro-climatic zones of the State of Madhya Pradesh. **An attempt, therefore, has been made in this presentation to highlight pointedly the impact of the K.V.Ks. covered under the study over the broad categories of : -**

- **Impact over Farm Activities – Agriculture Production**
- **Impact over Farm Activities – Other than Agriculture Production**
- **Impact over Non- Farm Activities**

All the aforesaid parameters are the basic determinants of the status of any rural economy controlling thereby the social aspects as well through various forward linkages.

#### **IMPACT OVER FARM ACTIVITIES – AGRICULTURE PRODUCTION**

10.2 For assessing the impact, the comparative performances between control village and adopted and cluster villages have been taken. **The average productivity figures of adopted and cluster villages pertaining to vocational training in after training situations have been taken into account as the maximum participation of cultivators are in vocational training which is one of the most important training programmes of K.V.K., besides Front Line Demonstration and On Farm Testing.** However, it has been observed after analysis of survey results that the difference in yield per-hectare is not much due to the efforts of vocational training, front line demonstrations and on-farm testing in after training (AT) situations. Therefore, the results of vocational training in after training situations have been considered to present a comparative status of yield per hectare between control village where there is no intervention of K.V.K. on one side and average performance of adopted and cluster village where there is intervention of K.V.K. on other side. **We might reiterate that for every K.V.K. three adopted villages, six cluster villages and one control village have been identified for detailed analysis.**

10.3 In the following table, K.V.K. wise analysis of yield per hectare [crop wise] have been attempted by arraying the K.V.Ks. according to their host organisation, i.e. K.V.Ks. run by N.G.Os. Jawahar Lal Nehru Krishi Vishwa Vidyalaya [J.N.K.V.V.], Jabalpur and Central Institute of Agriculture Engineering, GoI, with the objective of presenting relative efficiency among such institutions. The table below shows the details;

Table No. 10.1 [Farm Activities – Agriculture Production]

Sl. No.	Name of the K.V.K., Host organisation, Item of performance	Unit	Control Village	Adopted and cluster village - Vocational Training [Average]	Percentage variation over col. 4 (+) (-)	Distt. average productivity	State average productivity
1	2	3	4	5	6	7	8
<b>K.V.K. SATNA [N.G.O.]</b>							
<b>Agronomical Crops</b>							
<b>Cereals</b>							
1	Wheat	Kg/ha	3175.00	3379.56	+6.44	1305.00	1867.00
2	Paddy	Kg/ha	2443.00	3085.50	+26.40	1000.00	1058.00
3	Maize	Kg/ha	1600.00	1809.00	+13.06	1344.00	2072.00
4	Jowar	Kg/ha	500.00	-	-	945.00	1342.00
<b>Pulses</b>							
5	Gram	Kg/ha	3100.00	3128.44	+0.92	698.00	932.00
6	Arhar	Kg/ha	1250.00	1130.11	-9.59	501.00	825.00
7	Lentil	Kg/ha	1600.00	-	-	533.00	506.00
<b>Oil Seeds</b>							
8	Soybean	Kg/ha	-	-	-	634.00	1132.00
9	Mustard	Kg/ha	780.00	1058.67	+35.73	385.00	1009.00
10	Linseed	Kg/ha	-	-	-	343.00	452.00
<b>Horticulture Crops</b>							
11	Potato	Q/ha	187.00	212.56	+13.67	-	N.A.
12	Onion	Q/ha	158.00	241.20	+52.66	-	N.A.
13	Tomato	Q/ha	100.00	184.88	+84.88	-	N.A.
14	Brinjal	Q/ha	150.00	196.75	+31.17	-	N.A.
15	Chilly	Q/ha	80.00	168.75	+110.94	-	N.A.
16	Bhindi	Q/ha	75.00	189.60	+152.80	-	N.A.
17	Cucurbits	Q/ha	40.00	-	-	-	N.A.
18	Spices	Q/ha	50.00	-	-	-	N.A.
19	Papaya	Q/ha	-	-	-	-	N.A.
20	Citrus	Q/ha	-	-	-	-	N.A.

Q = Quintal

Table No. 10.1 [Contd...] [Farm Activities – Agriculture Production]

Sl. No.	Name of the K.V.K., Host organisation, Item of performance	Unit	Control Village	Adopted and cluster village Vocational Training [Average]	Percentage varieties over col. 4 (+) (-)	Distt. Average productivity	State average productivity
1	2	3	4	5	6	7	8
<b>K.V.K. INDORE [N.G.O.]</b>							
<b>Agronomical Crops</b>							
<b>Cereals</b>							
1	Wheat	Kg/ha	3294.00	3993.22	+21.23	2698.00	1867.00
2	Paddy	Kg/ha	-	-	-	667.00	1058.00
3	Maize	Kg/ha	1688.00	2344.00	+38.86	1525.00	2072.00
4	Jowar	Kg/ha	738.00	1806.75	+144.82	1354.00	1342.00
<b>Pulses</b>							
5	Gram	Kg/ha	1005.00	1093.89	+8.84	920.00	932.00
6	Arhar	Kg/ha	1038.00	1542.80	+48.63	656.00	825.00
7	Lentil	Kg/ha	-	1005.00	-	361.00	506.00
<b>Oil Seeds</b>							
8	Soybean	Kg/ha	1091.00	1180.22	+8.18	1070.00	1132.00
9	Mustard	Kg/ha	-	1700.00	-	925.00	1009.00
10	Linseed	Kg/ha	-	-	-	800.00	452.00
<b>Horticulture Crops</b>							
11	Potato	Q/ha	197.00	284.50	+44.41	N.A.	N.A.
12	Onion	Q/ha	197.00	261.67	+32.83	N.A.	N.A.
13	Tomato	Q/ha	164.00	228.13	+39.10	N.A.	N.A.
14	Brinjal	Q/ha	183.00	220.63	+20.56	N.A.	N.A.
15	Chilly	Q/ha	-	252.50	-	N.A.	N.A.
16	Bhindi	Q/ha	100.00	162.50	+62.50	N.A.	N.A.
17	Cucurbits	Q/ha	85.00	-	-	N.A.	N.A.
18	Spices	Q/ha	-	-	-	N.A.	N.A.
19	Papaya	Q/ha	-	-	-	N.A.	N.A.
20	Citrus	Q/ha	-	-	-	N.A.	N.A.

Table No. 10.1 [Contd...] [Farm Activities – Agriculture Production]

Sl. No.	Name of the K.V.K., Host organisation, Item of performance	Unit	Control Village	Adopted and cluster village Vocational Training [Average]	Percentage varieties over col. 4 (+) (-)	Distt. Average productivity	State average productivity
1	2	3	4	5	6	7	8
<b>K.V.K. CHHINDWARA, J.N.K.V.V., JABALPUR</b>							
<b>Agronomical Crops</b>							
<b>Cereals</b>							
1	Wheat	Kg/ha	3850.00	4014.00	+4.26	2096.00	1867.00
2	Paddy	Kg/ha	2200.00	2433.00	+10.59	914.00	1058.00
3	Maize	Kg/ha	2264.00	2287.00	+1.02	2949.00	2072.00
4	Jowar	Kg/ha	1045.00	1097.00	+4.98	986.00	1342.00
<b>Pulses</b>							
5	Gram	Kg/ha	1500.00	2087.00	+39.13	1344.00	932.00
6	Arhar	Kg/ha	1200.00	1455.00	+18.75	1679.00	825.00
7	Lentil	Kg/ha	750.00	761.00	+1.47	434.00	506.00
<b>Oil Seeds</b>							
8	Soybean	Kg/ha	1569.00	2198.00	+40.09	1464.00	1132.00
9	Mustard	Kg/ha	1000.00	1521.00	+52.10	714.00	1009.00
10	Linseed	Kg/ha	1000.00	2486.00	+148.60	534.00	452.00
<b>Horticulture Crops</b>							
11	Potato	Q/ha	287.00	316.00	+8.72	N.A.	N.A.
12	Onion	Q/ha	203.00	252.00	+24.14	N.A.	N.A.
13	Tomato	Q/ha	219.00	228.00	+4.11	N.A.	N.A.
14	Brinjal	Q/ha	240.00	247.00	+2.92	N.A.	N.A.
15	Chilly	Q/ha	176.00	183.00	+3.98	N.A.	N.A.
16	Bhindi	Q/ha	100.00	155.00	+5.00	N.A.	N.A.
17	Cucurbits	Q/ha	-	142.00	-	N.A.	N.A.
18	Spices	Q/ha	100.00	130.00	+30.00	N.A.	N.A.
19	Papaya	Q/ha	120.00	198.00	+65.00	N.A.	N.A.
20	Citrus	Q/ha	-	148.00	-	N.A.	N.A.

J.N.K.V.V. : Jawaharlal Nehru Krishi Vishwa Vidyalaya

Table No. 10.1 [Contd...] [Farm Activities – Agriculture Production]

Sl. No.	Name of the K.V.K., Host organisation, Item of performance	Unit	Control Village	Adopted and cluster village Vocational Training [Average]	Percentage varieties over col. 4 (+) (-)	Distt. Average productivity	State average productivity
1	2	3	4	5	6	7	8
<b>K.V.K. SHAHDOL, J.N.K.V.V., JABALPUR</b>							
<b>Agronomical Crops</b>							
<b>Cereals</b>							
1	Wheat	Kg/ha	3033.00	3213.67	+5.96	771.00	1867.00
2	Paddy	Kg/ha	2291.00	2303.00	+0.52	997.00	1058.00
3	Maize	Kg/ha	1417.00	1456.00	+2.75	1299.00	2072.00
4	Jowar	Kg/ha	533.00	850.00	+59.47	1134.00	1342.00
<b>Pulses</b>							
5	Gram	Kg/ha	900.00	2300.89	+155.56	452.00	932.00
6	Arhar	Kg/ha	800.00	1022.56	+27.82	567.00	825.00
7	Lentil	Kg/ha	-	700.00	-	439.00	506.00
<b>Oil Seeds</b>							
8	Soybean	Kg/ha	-	-	-	509.00	1132.00
9	Mustard	Kg/ha	733.00	819.00	+11.77	315.00	1009.00
10	Linseed	Kg/ha	-	-	-	295.00	452.00
<b>Horticulture Crops</b>							
11	Potato	Q/ha	-	216.20	-	N.A.	N.A.
12	Onion	Q/ha	200.00	248.33	+24.17	N.A.	N.A.
13	Tomato	Q/ha	170.00	187.88	+10.52	N.A.	N.A.
14	Brinjal	Q/ha	180.00	271.44	+50.80	N.A.	N.A.
15	Chilly	Q/ha	-	185.14	-	N.A.	N.A.
16	Bhindi	Q/ha	-	163.33	-	N.A.	N.A.
17	Cucurbits	Q/ha	-	190.00	-	N.A.	N.A.

J.N.K.V.V. : Jawaharlal Nehru Krishi Vishwa Vidyalaya

Table No. 10.1 [Contd...] [Farm Activities – Agriculture Production]

Sl. No.	Name of the K.V.K., Host organisation, Item of performance	Unit	Control Village	Adopted and cluster village Vocational Training [Average]	Percentage varieties over col. 4 (+) (-)	Distt. Average productivity	State average productivity
1	2	3	4	5	6	7	8
<b>K.V.K. TIKAMGARH, J.N.K.V.V., JABALPUR</b>							
<b>Agronomical Crops</b>							
<b>Cereals</b>							
1	Wheat	Kg/ha	4060.00	4176.33	+2.86	2162.00	1867.00
2	Paddy	Kg/ha	3240.00	3418.67	+5.51	887.00	1058.00
3	Maize	Kg/ha	2028.00	2034.00	+0.33	1226.00	2072.00
4	Jowar	Kg/ha	-	1393.43	-	1379.00	1342.00
<b>Pulses</b>							
5	Gram	Kg/ha	1800.00	2448.33	+36.02	1473.00	932.00
6	Arhar	Kg/ha	1629.00	1688.67	+3.50	1582.00	825.00
7	Lentil	Kg/ha	1500.00	1550.20	+3.35	576.00	506.00
<b>Oil Seeds</b>							
8	Soybean	Kg/ha	1970.00	2945.75	+49.53	1462.00	1132.00
9	Mustard	Kg/ha	1606.00	1635.63	+1.84	567.00	1009.00
10	Linseed	Kg/ha	3000.00	3001.00	+0.03	468.00	452.00
<b>Horticulture Crops</b>							
11	Potato	Q/ha	240.00	242.33	+0.97	N.A.	N.A.
12	Onion	Q/ha	179.00	184.25	+2.93	N.A.	N.A.
13	Tomato	Q/ha	210.00	218.78	+4.18	N.A.	N.A.
14	Brinjal	Q/ha	200.00	273.38	+36.69	N.A.	N.A.
15	Chilly	Q/ha	210.00	212.22	+36.49	N.A.	N.A.
16	Bhindi	Q/ha	87.00	163.63	+131.72	N.A.	N.A.
17	Cucurbits	Q/ha	-	-	-	N.A.	N.A.
18	Spices	Q/ha	-	-	-	N.A.	N.A.
19	Papaya	Q/ha	-	105.00	-	N.A.	N.A.
20	Citrus	Q/ha	-	-	-	N.A.	N.A.

J.N.K.V.V. : Jawaharlal Nehru Krishi Vishwa Vidyalaya

Table No. 10.1 [Contd...] [Farm Activities – Agriculture Production]

Sl. No.	Name of the K.V.K., Host organisation, Item of performance	Unit	Control Village	Adopted and cluster village Vocational Training [Average]	Percentage varieties over col. 4 (+) (-)	Distt. Average productivity	State average productivity
1	2	3	4	5	6	7	8
<b>K.V.K., CENTRAL INSTITUTE OF AGRICULTURE ENGINEERING, BHOPAL</b>							
<b>Agronomical Crops</b>							
<b>Cereals</b>							
1	Wheat	Kg/ha	1971.00	2076.00	+5.33	1837.00	1867.00
2	Paddy	Kg/ha	576.00	700.00	+21.53	727.00	1058.00
3	Maize	Kg/ha	1492.00	1975.00	+32.37	1566.00	2072.00
4	Jowar	Kg/ha	596.00	1002.00	+68.12	1216.00	1342.00
<b>Pulses</b>							
5	Gram	Kg/ha	1059.00	1252.00	+18.22	1002.00	932.00
6	Arhar	Kg/ha	1115.00	1455.00	+30.49	550.00	825.00
7	Lentil	Kg/ha	811.00	1003.00	+23.67	484.00	506.00
<b>Oil Seeds</b>							
8	Soybean	Kg/ha	1127.00	1156.00	+2.57	1076.00	1132.00
9	Mustard	Kg/ha	857.00	1216.00	+41.89	818.00	1009.00
10	Linseed	Kg/ha	457.00	-	-	781.00	452.00
<b>Horticulture Crops</b>							
11	Potato	Q/ha	100.00	181.00	+81.00	N.A.	N.A.
12	Onion	Q/ha	-	151.67	-	N.A.	N.A.
13	Tomato	Q/ha	-	178.44	-	N.A.	N.A.
14	Brinjal	Q/ha	100.00	197.00	+97.00	N.A.	N.A.
15	Chilly	Q/ha	160.00	201.00	+25.63	N.A.	N.A.
16	Bhindi	Q/ha	50.00	113.00	126.00	N.A.	N.A.
17	Cucurbits	Q/ha	-	127.75	-	N.A.	N.A.
18	Spices	Q/ha	-	-	-	N.A.	N.A.
19	Papaya	Q/ha	-	200.50	-	N.A.	N.A.
20	Citrus	Q/ha	-	30.00	-	N.A.	N.A.

#### **FARM ACTIVITIES–AGRICULTURE PRODUCTION–K.V.K. SATNA, RUN BY AN N.G.O.**

- 10.4 Compared to control village the per-hectare yield of all the crops is higher in adopted and cluster villages [except for arhar crop where a reverse trend is true]. The percentage increase is maximum for Bhindi crop [110.94 percent] and minimum for Gram [0.92 percent].
- 10.5 For all the agronomical crops under report, the per-hectare yield in adopted and cluster villages is higher than district and state average productivity [except for the maize crop where State level productivity is higher].
- 10.6 Viewed from the basic agriculture related indicator of percentage of gross irrigated area to gross cropped area which is only 7.19 percent in all the identified 10 villages covered under the study [much lower than district average of 23.27 percent and state average of 28.54 percent] the enhanced yield per hectare in adopted and cluster villages is a valuable contribution doubly justifying the positive role of K.V.K. functionaries.
- 10.7 The above analysis clearly indicates the impact of the efforts of the K.V.Ks. intervention through transfer of technology for enhancing yield rates of both agronomical and horticultural crops.**

#### **FARM ACTIVITIES–AGRICULTURE PRODUCTION–K.V.K. INDORE RUN BY AN N.G.O.**

- 10.8 Similar to K.V.K. Satna, in Indore K.V.K. also per hectare yield of all the agronomical and horticulture crops is higher in adopted and cluster villages in after training situations as compared to yield rates prevailing in control village where there is no intervention of K.V.K. The percentage increase ranged between maximum of 144.82 for Jowar crop to minimum of 8.18 for Soybean. Among horticulture crops the impact of K.V.Ks. effort is laudable for Bhindi where percentage increase in per-hectare yield is 62.50 as compared to the per-hectare yield of control village.
- 10.9 For all the agronomical crops, the per-hectare yield prevailing in adopted and cluster villages in after training situations is much higher than the average productivities in vogue at both district and State levels.
- 10.10 The above performance in all the ten identified villages covered under the study is supported by availability of irrigation facilities as the percentage of gross irrigated area to gross cropped area is 54.23, much higher than the district average of 36.70 percent and State average of 28.54 percent.
- 10.11 From the aforesaid analysis the positive impact of the efforts of the K.V.K. over crop production may safely be concluded.**

#### **FARM ACTIVITIES – AGRICULTURE PRODUCTION – K.V.K. CHHINDWARA RUN BY JAWAHARLAL NEHRU KRISHI VISHWA VIDYALAYA [J.N.K.V.V.], JABALPUR**

- 10.12 The above table shows a status of enhanced productivity relating to all agronomical and horticulture crops in adopted and cluster villages in after training situations as compared to the crop productivities prevailing in control village. The percentage increase in productivity is highest for Linseed [148.60 percent] and lowest for Maize [1.02 percent]. One of the remarkable features of the K.V.K. Chhindwara is the awareness of the cultivators about value of horticulture crops as is evident from the fact that vocational trainings have been organised for almost all the crops with substantial percentage enhancement in productivities of Spices and Papaya crops as compared to the productivity status of control village.
- 10.13 For all the agronomical crops, in general, the per-hectare yield in adopted and cluster villages in after training situations, is higher than average productivities both at district and State levels except for the crops like Maize and Arhar where the district average productivities are more than adopted and cluster villages.



- 10.14 One of the important contributory factors for enhanced crop productivity is the availability of irrigation sources as the percentage of gross irrigated area to gross cropped area is 35.76 for all the ten number of villages identified for the study, which is more than the district and State average figures of 22.51 percent and 28.54 percent respectively.
- 10.15 Viewing things from crop productivity angle, in which culminates all the efforts regarding improved agriculture practices including technology transfer, the positive impact of the efforts of the K.V.K. is evident.**

**FARM ACTIVITIES – AGRICULTURE PRODUCTION – K.V.K. SHAHDOL RUN BY JAWAHARLAL NEHRU KRISHI VISHWA VIDYALAYA [J.N.K.V.V.], JABALPUR**

- 10.16 The basic fact revealed by the above table is that for all the crops under report, for which vocational training programmes have been organised, the per-hectare yield for adopted and cluster villages in after training situations is higher than those prevailing in control village with percentage increase variation of 0.52 for Paddy to 155.56 for Gram. Regarding horticulture crops which is gradually picking-up in K.V.K. Shahdol, the performance for Brinjal crop is encouraging with enhancement of 50.80 percent in per-hectare yield in adopted and cluster villages having direct intervention of K.V.K. compared to control village, in after training conditions.
- 10.17 Except for the Jowar crop for which average productivity both at district and State levels is higher than per-hectare yield prevailing in adopted and cluster villages in after training situations, for rest of the crops, in general, the per hectare yield for adopted and cluster villages is higher than the average productivities in vogue for both district and State levels.
- 10.18 Since the percentage of gross irrigated area to gross cropped area is only 3.90 for all the ten villages covered under the study, the efforts to enhance the agricultural productivity by the personnel of K.V.K., Shahdol against such depleted irrigation facility is laudable.
- 10.19 It hardly needs any reiteration to say that the impact of K.V.Ks. efforts for enhancing agriculture production is impressive.

**FARM ACTIVITIES – AGRICULTURE PRODUCTION – K.V.K. TIKAMGARH RUN BY JAWAHARLAL NEHRU KRISHI VISHWA VIDYALAYA [J.N.K.V.V.], JABALPUR**

- 10.20 Like other K.V.Ks. as detailed-out in foregoing paragraphs, the yield per-hectare in adopted and cluster villages of K.V.K. Tikamgarh in after training conditions, as a result of vocational training, is more than the yield rates prevailing in control village for all the agronomical and horticulture crops. The percentage increase in yield rates for adopted and cluster villages in after training situations as compared to yield rates prevailing in control village ranged between 0.33 for Maize crop to 131.72 for Bhindi crop. However, substantial percentage increase in per-hectare yield of crops like Gram, Soybean, Brinjal and Chilly is also seen.
- 10.21 For all the agronomical crops [except Maize where average productivity at State level is more than per hectare yield of adopted and cluster villages] the per hectare yield prevailing in adopted and cluster villages in after training situation is more than the average productivity prevailing at district and State levels.
- 10.22 The fair performance in agriculture production is also supported by availability of irrigational facilities as the percentage of gross irrigated area to gross cropped area is 64.20 for all the identified ten number of villages covered under the study which is much above the district average of 53.56 percent and state average of 28.54 percent.
- 10.23 The conclusion that can be drawn from the above narration is that in the field of agriculture production the impact of K.V.Ks. effort is fairly satisfactory.**

**FARM ACTIVITIES – AGRICULTURE PRODUCTION – K.V.K. BHOPAL RUN BY CENTRAL INSTITUTE OF AGRICULTURE ENGINEERING, GOVT. OF INDIA**

- 10.24 In case of K.V.K., Bhopal also the per-hectare yield of all the agronomical and horticulture crops under report is higher for adopted and cluster villages as compared to yield rates of control village in after training situations. The percentage increase in yield varied between 2.57 for Soybean crop to 126.00 for Bhindi crop. Particularly for horticulture crops the percentage increase in productivity in adopted and cluster villages as compared to control village is remarkable.
- 10.25 For most of the agronomical crops like Wheat, Gram, Arhar, Lentil Soybean and Mustard the per-hectare yield prevailing in adopted and cluster villages in after training situations is higher than average productivity prevailing at district and State levels.
- 10.26 One of the contributory factors for fair performance in the sphere of agriculture production is the high percentage of gross irrigated area to gross cropped area which is 37.18 for ten identified villages more than the district average of 33.19 percent and State average of 28.54 percent.
- 10.27 The above analysis clearly indicates the impact of the efforts of the K.V.K's. intervention through transfer of technology for enhancing yield rates of both agronomical and horticultural crops.**
- 10.28 In what follows an attempt has been made to present a comparative analysis of percentage increase in per-hectare yield over the six K.V.Ks. in tabular form.

Table No. 10.2

Comparative Information Regarding Percentage Increase in Per Hectare Yield in Adopted and Cluster Villages Compared to Control Village

Sl. No.	Name of the Crop	K.V.K. wise percentage increase in per-hectare yield of crops					
		K.V.K. Satna N.G.O.	K.V.K. Indore N.G.O.	K.V.K. Chhindwara J.N.K.V.V.	K.V.K. Shahdol J.N.K.V.V.	K.V.K. Tikamgarh J.N.K.V.V.	K.V.K. Bhopal CIAE, GoI
1	2	3	4	5	6	7	8
<b>AGRONOMICAL CROPS</b>							
	<b>Cereals</b>						
1	Wheat	6.44	21.23	4.26	5.96	2.86	5.33
2	Paddy	26.40	-	10.59	0.52	5.51	21.53
3	Maize	13.06	38.86	1.02	2.75	0.33	32.37
4	Jowar	-	144.82	4.98	59.47	-	68.12
	<b>Pulses</b>						
5	Gram	0.92	8.84	39.13	155.56	36.02	18.22
6	Arhar	9.59	48.63	18.75	27.82	3.50	30.49
7	Lentil	-	-	1.47	-	3.35	23.67
	<b>Oil Seeds</b>						
8	Soybean	-	8.18	40.09	-	49.53	2.57
9	Mustard	35.73	-	52.10	11.77	1.84	41.89
10	Linseed	-	-	148.60	-	0.03	-
<b>HORTICULTURE CROPS</b>							
11	Potato	13.67	44.42	8.72	-	0.97	81.00
12	Onion	52.66	32.83	24.14	24.17	2.93	-
13	Tomato	84.88	39.10	4.11	10.52	4.18	-
14	Brinjal	31.17	20.56	2.92	50.80	36.69	97.00
15	Chilly	110.94	-	3.98	-	36.49	25.63
16	Bhindi	152.80	62.50	5.00	-	131.72	126.00
17	Cucurbits	-	-	-	-	-	-
18	Spices	-	-	30.00	-	-	-
19	Papaya	-	-	65.00	-	-	-
20	Citrus	-	-	-	-	-	-

10.29 The above table shows that out of total of maximum of 18 number of crops for which vocational trainings have been organised, for 8 number of crops viz Paddy, Maize, Jowar, Arhar, Potato, Onion, Tomato, Chilly and Bhindi the percentage increase in per- hectare yield is higher in K.V.Ks. [Satna, Indore] run by the N.G.Os. while for four number of crops viz Wheat, Gram, Mustard and Linseed the performance of K.V.Ks. Chhindwara, Shahdol and Timamgarh run by J.N.K.V.V., Jabalpur is comparatively better. For four number of crops viz. Maize, Lentil, Potato and Brinjal the percentage increase in per-hectare yield in adopted and cluster villages as compared to control village for K.V.K., Bhopal run by C.I.A.E., GoI is better. **The overall performance of K.V.Ks. run by N.G.Os. is thus comparatively better so for the percentage yield per-hectare is concerned.**

### IMPACT OVER FARM ACTIVITIES – OTHER THAN AGRICULTURE PRODUCTION

10.30 In what follows an attempt has been made to analyse the following functions performed by the K.V.Ks. which support the farm activities :-

- Agro Forestry
- Organic Farming
- Watershed Activities

10.31 These activities are supposed to be performed by the K.V.Ks. as a part of their mandate.

10.32 For this purpose also vocational training efforts have been taken into consideration as the response to such trainings is maximum. Moreover, since the results of front line demonstrations and on- farm testing are not in much variation with the results of vocational training, it has been felt appropriate to take the results of vocational training for wrap-up purposes.

10.34 For the sake of analysis, adopted and cluster villages have been taken, in the performance categories of Before Training [B.T.] and After Training [A.T.] conditions. Before Training conditions may be taken as conditions prevailing in control villages as in control villages such activities are generally missing. However a comparison between B.T. and A.T. situations will show the impact of K.V.Ks. effort.

10.35 The table below shows the details;

Table No. 10.3  
Farm Activities – Other than Agriculture Production

Sl. No.	Name of the KVK, Host Organisation Item of performance	Vocational Training					
		Adopted Villages			Cluster Villages		
		BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8
1	On Farm Plantation (Hec.)	-	-	-	-	-	-
2	Preparation of farm yard manures	-	-	-	-	-	-
3	Compost of NADEP	-	858	-	-	-	-
4	Bio-fertilizer	0	360	858	-	498	85850%
5	Bio-pesticide	-	-	-	-	-	-
6	Nallah bunding	-	-	-	-	-	-
7	Check dams	-	-	-	-	-	-
8	Counter trenches	-	-	-	-	-	-
9	Soak pits	-	-	-	-	-	-
10	Farm ponds	-	-	-	-	-	-

**B.T. = Before Training, A.T. After Training**

Table No. 10.3 [Contd...]  
Farm Activities – Other than Agriculture Production

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Indore [N.G.O.]</b>								
<b>AGRO-FORESTRY</b>								
1	On Farm Plantation	Hect.	-	-	-	-	-	-
<b>ORGANIC FARMING</b>								
2	Preparation of farm yard manures	Kg.	0	6	-	-	-	-
3	Compost of NADEP	No.	-	5	600	-	1	-
4	Bio-fertilizer	Kg.	-	-	-	-	-	-
5	Bio-pesticide	Liter	-	-	-	-	8	-
<b>WATERSHED ACTIVITIES</b>								
6	Nallah bunding	No.	-	-	-	-	-	-
7	Check dams	No.	-	-	-	-	-	-
8	Counter trenches	No.	-	-	-	-	-	-
9	Soak pits	No.	-	-	-	-	-	-
10	Farm ponds	No.	-	-	-	-	-	-

**B.T. = Before Training, A.T. After Training**

Table No. 10.3 [Contd...]  
Farm Activities – Other than Agriculture Production

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Chhindwara, J.N.K.V.V.</b>								
<b>AGRO-FORESTRY</b>								
1	On Farm Plantation	Hect.	-	5	-	-	-	-
<b>ORGANIC FARMING</b>								
2	Preparation of farm yard manures	Kg.	-	-	-	-	-	-
3	Compost of NADEP	No.	-	17	-	1	11	1000.00
4	Bio-fertilizer	Kg.	-	880	-	50	4270	8440.00
5	Bio-pesticide	Liter	-	-	-	70	550	685.71
<b>WATERSHED ACTIVITIES</b>								
6	Nallah bunding	No.	-	-	-	-	-	-
7	Check dams	No.	-	-	-	-	-	-
8	Counter trenches	No.	-	-	-	-	-	-
9	Soak pits	No.	-	-	-	-	-	-
10	Farm ponds	No.	-	-	-	-	-	-

**B.T. = Before Training, A.T. After Training**

Table No. 10.3 [Contd...]  
Farm Activities – Other than Agriculture Production

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Shahdol, J.N.K.V.V., JABALPUR</b>								
<b>AGRO-FORESTRY</b>								
1	On Farm Plantation	Hect.	-	-	-	-	-	-
<b>ORGANIC FARMING</b>								
2	Preparation of farm yard manures	Kg.	-	-	-	-	-	-
3	Compost of NADEP	No.	-	-	-	-	-	-
4	Bio-fertilizer	Kg.	40	415	937.50	-	225	-
5	Bio-pesticide	Liter	-	-	-	-	-	-
<b>WATERSHED ACTIVITIES</b>								
6	Nallah bunding	No.	-	-	-	-	-	-
7	Check dams	No.	-	-	-	-	-	-
8	Counter trenches	No.	-	-	-	-	-	-
9	Soak pits	No.	-	-	-	-	-	-
10	Farm ponds	No.	-	-	-	-	-	-

**B.T. = Before Training, A.T. After Training**

Table No. 10.3 [Contd...]  
Farm Activities – Other than Agriculture Production

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Tikamgarh, J.N.K.V.V. JABALPUR</b>								
<b>AGRO-FORESTRY</b>								
1	On Farm Plantation	Hect.	-	-	-	-	-	-
<b>ORGANIC FARMING</b>								
2	Preparation of farm yard manures	Kg.	-	-	-	-	-	-
3	Compost of NADEP	No.	-	-	-	-	-	-
4	Bio-fertilizer	Kg.	-	1870	-	-	1675	-
5	Bio-pesticide	Liter	11	201	1727.27	-	19	-
<b>WATERSHED ACTIVITIES</b>								
6	Nallah bunding	No.	-	-	-	-	-	-
7	Check dams	No.	-	-	-	-	-	-
8	Counter trenches	No.	-	-	-	-	-	-
9	Soak pits	No.	-	-	-	-	-	-
10	Farm ponds	No.	-	-	-	-	-	-

**B.T. = Before Training, A.T. After Training**

Table No. 10.3 [Contd...]  
Farm Activities – Other than Agriculture Production

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Bhopal, C.I.A.E., GOI</b>								
<b>AGRO-FORESTRY</b>								
1	On Farm Plantation	Hect.	15	25	66.67	4	39	875.00
<b>ORGANIC FARMING</b>								
2	Preparation of farm yard manures	Kg.	-	-	-	-	-	-
3	Compost of NADEP	No.	-	-	-	-	-	-
4	Bio-fertilizer	Kg.	-	-	-	-	-	-
5	Bio-pesticide	Liter	-	-	-	-	-	-
<b>WATERSHED ACTIVITIES</b>								
6	Nallah bunding	No.	-	-	-	-	-	-
7	Check dams	No.	-	-	-	-	-	-
8	Counter trenches	No.	-	-	-	-	-	-
9	Soak pits	No.	6	227	3683.33	6	154	2466.67
10	Farm ponds	No.	-	-	-	-	-	-

**B.T. = Before Training, A.T. After Training**

#### **FARM ACTIVITIES – OTHER THAN AGRICULTURE PRODUCTION – K.V.K. SATNA RUN BY AN N.G.O.**

10.38 The information contained in the above table shows that in the category of organic farming, vocational training regarding preparation of bio-fertilizer has been organised in the sample adopted and cluster villages with preparation of 360 and 498 kgs of bio-fertilizer in adopted and cluster villages respectively in A.T. situations with nil production in B.T. situations. **The impact of the K.V.Ks. effort is obvious, though on a very limited scale.**

#### **FARM ACTIVITIES – OTHER THAN AGRICULTURE PRODUCTION – K.V.K. INDORE RUN BY AN N.G.O.**

10.39 Here again the vocational trainings have been organised for preparation of compost by NADEP method and bio-fertilizer with nil performance in B.T. situations. However, physical performance in AT situation is marginal as 5 and 1 number of compost pits have been constructed in adopted and cluster villages respectively and 8 liters of bio-pesticide have been prepared in cluster villages. **The marginal impact of the K.V.Ks. effort is obviously visible.**

#### **FARM ACTIVITIES – OTHER THAN AGRICULTURE PRODUCTION – K.V.K. CHHINDWARA RUN BY J.N.K.V.V., JABALPUR**

10.40 In the category of agro-forestry, vocational trainings have been organised for on farm plantation by K.V.K. Chhindwara with five hectare of area covered under it in adopted villages as a result of imparting vocational training. The performance in cluster villages is nil along with nil performance in B.T. situations for both adopted and cluster villages.

10.41 Regarding **Organic farming**, 17 number of NADEP pits have been constructed in adopted villages in AT situation as against nil performance in B.T. conditions. In cluster villages 11 number of such pits have been constructed in A.T. conditions as against only one pit in B.T. conditions. Similarly for bio-fertilizer 880 kgs have been produced in AT conditions against nil performance in B.T. situation for adopted villages, while for cluster villages the preparation of 4270 kgs of bio-fertilizer in after training situation as compared to preparation of only 50 kgs in B.T. situation is a definite indication of the impact of the K.V.Ks. efforts. Regarding bio-pesticide the preparation 550 liters in cluster

villages in A.T. situations as against preparation of 70 liters of bio-fertilizer in B.T. conditions is **definite indication of the impact of K.V.Ks. efforts through imparting vocational training.**

**10.42 Since no vocational trainings have been organised for watershed activities the impact of this activity is nil as revealed by the results of the survey.**

**FARM ACTIVITIES – OTHER THAN AGRICULTURE PRODUCTION – K.V.K. SHAHDOL RUN BY J.N.K.V.V., JABALPUR**

10.43 In case of K.V.K. Shahdol, vocational trainings have been organised for preparation of bio-fertilizer falling in the category of organic farming with production of 415 kgs of bio-fertilizer in adopted villages in after training conditions as compared to 40 kgs in B.T. situations while for cluster villages the production is 225 kg in after training conditions with nil production B.T. situations. **The impact of the K.V.Ks. effort is visible in limited scale.**

**10.44 Since no vocational trainings have been organised on subjects like agro-forestry and watershed activities the impact of such activities will not be visible.**

**FARM ACTIVITIES – OTHER THAN AGRICULTURE PRODUCTION – K.V.K. TIKAMGARH RUN BY J.N.K.V.V., JABALPUR**

10.45 In case of K.V.K. Shahdol, vocational trainings have been organised for preparation of bio-fertilizer and bio-pesticide. Regarding bio-fertilizer 1870 kg and 1675 kg of production occurred in after training conditions for adopted and cluster village respectively with nil performance in before training situations. Similarly for bio-pesticide 201 liter and 19 liter of production has been accomplished in after training conditions for adopted and cluster villages respectively.

**FARM ACTIVITIES – OTHER THAN AGRICULTURE PRODUCTION – K.V.K. BHOPAL RUN BY CENTRAL INSTITUTE OF AGRICULTURE ENGINEERING, GOI**

10.46 Regarding on farm plantation covered under the category of agro-forestry the performance in A.T. conditions is better for adopted and cluster villages as the physical performance is 25 hectare and 39 hectare respectively as against 15 hectare and 4 hectare respectively in B.T. conditions.

10.47 Regarding construction of soak-pits covered under the category of watershed activity, the performance in after training conditions is remarkable in both adopted and cluster villages as 227 and 154 number of soak-pits respectively have been constructed against the 6 and 6 number of soak-pits respectively constructed in B.T. conditions.

10.48 In what follows an attempt has been made to present a summary table incorporating the information regarding B.T., A.T. situations of all the six K.V.Ks. to have a bird eye view of the activities other than agriculture production. Normally the figures pertaining to adopted villages have been taken as there is not much difference in performance between adopted and cluster villages with almost covering identical subjects.

Table No. 10.4

Summary Table Regarding Activities other than Agriculture Production in Before Training and After Training Conditions

Sl. No.	Item	Unit	K.V.K. Satna [NGO]			K.V.K. Indore [NGO]			K.V.K. Chhindwara J.N.K.V.V.		
			BT	AT	% increase	BT	AT	% increase	BT	AT	% increase
1	2	3	4	5	6	7	8	9	10	11	12
<b>AGRO-FORESTRY</b>											
1	On Farm Plantation	Hect							-	5	-
<b>ORGANIC FARMING</b>											
2	Preparation of farm yard manure	Kg.					5				
3	Compost by NADEP	No.				-	5	-	-	17	-
4	Bio-fertilizer	Kg.	-	360	-				-	880	-
5	Bio-pesticide	Ltr.				-	8	-	70	550	685.71
<b>WATERSHED ACTIVITIES</b>											
6	Nallah bunding	No.									
7	Check dams	No.									
8	Counter trenches	No.									
9	Soak pits	No.									
10	Farm Ponds	No.									

Table No. 10.4 [Contd...]

Summary Table Regarding Activities other than Agriculture Production in Before Training and After Training Conditions

Sl. No.	Item	Unit	K.V.K. Shahdol [J.N.K.V.V.]			K.V.K. Tikamgarh [J.N.K.V.V.]			K.V.K. Bhopal [CIAE, GOI]		
			BT	AT	% increase	BT	AT	% increase	BT	AT	% increase
1	2	3	13	14	15	16	17	18	19	20	21
<b>AGRO-FORESTRY</b>											
1	On Farm Plantation	Hect							15	25	66.67
<b>ORGANIC FARMING</b>											
2	Preparation of farm yard manure	Kg.									
3	Compost by NADEP	No.									
4	Bio-fertilizer	Kg.	48	415	937.50	-	1870	-			
5	Bio-pesticide	Ltr.				11	201	1727.27			
<b>WATERSHED ACTIVITIES</b>											
6	Nallah bunding	No.									
7	Check dams	No.									
8	Counter trenches	No.									
9	Soak pits	No.							6	227	3683.33
10	Farm Ponds	No.									

**10.49** The above table clearly shows that in our area of study, compared to agriculture production the number of vocational trainings organised for subjects other than agriculture production is almost sketchy. One of the basic reasons is the concentrated interest of the farming communities to enhance agriculture production without tying up of funds in activities other than agriculture. Moreover, the nature of vocational training for subjects referred above is suggestive, the acceptance of which by participating cultivators is mainly dependent on resource availability. A normal cultivator with average size of holding hardly have any inclination for taking up any watershed activity or agro- forestry as their basic interest lies in enhancement in agriculture production.



**10.50** However, the performance regarding bio-fertilizer and bio-pesticide is encouraging as the results of after training situation is impressive, though on limited scale. The only silver lining lies in the fact that cultivators of sample area have started understanding the value of the use of bio-fertilizer and bio-pesticide against the hazards of excessive chemical fertilization. The things are, really, picking-up.

## IMPACT OVER NON-FARMING ACTIVITIES

10.51 Non-farming activities are important for any rural economy for their immense potentiality in creating employment opportunities, augmentation of income, thereby reducing pressure on land. Most of the target oriented welfare programmes of the government are related to non-farm activities, encouraging the rural population to take-up other activities, even on marginal basis for enhancement in family income. Because of these reasons the K.V.K. personnel are required to hold training to boost-up non-farming activities in the villages. The table below shows the details;

Table No. 10.5  
Non Farm Activities

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Satna, N.G.O.</b>								
<b>LIVESTOCK AND DAIRYING</b>								
1	Improved breed	No.	-	-	-	-	-	-
2	Milk production	Liters	-	-	-	-	-	-
3	Artificial insemination	No.	-	-	-	-	-	-
4	Vaccination	No.	-	-	-	-	-	-
<b>POULTRY</b>								
5	Improved breed	No.	-	38	-	-	-	-
6	Broilers	No.	-	-	-	-	-	-
7	Egg production	No.	-	-	-	-	-	-
8	Vaccination	No.	21	4	-80.95	-	-	-
<b>FISHERY DEVELOPMENT</b>								
9	Fish seed production	Qntl.	-	-	-	-	-	-
10	Fish production	Qntl.	-	-	-	-	-	-
<b>HOME SCIENCE</b>								
11	Toy making	No.	-	-	-	-	-	-
12	Pickles	Kg.	5	107	2040	17	174	923.53
13	Bakery	Kg.	-	3	-	-	-	-
14	Jute items	No.	-	-	-	-	-	-
15	Papad/Bari/Jam/Jelly	Kg.	-	40	-	-	66	-
<b>TRAINING OF RURAL YOUTH</b>								
16	Motor binding	Placement No.	-	-	-	-	1	-
17	Engine repair	"	-	-	-	-	2	-
18	Black smithy	"	-	-	-	-	-	-
19	Carpentry	"	-	-	-	-	-	-
20	Masonry	"	-	-	-	-	-	-

**BT = Before Training, AT = After Training**

Table No. 10.5 [Contd...] [Non Farm Activities]

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Indore [N.G.O.]</b>								
<b>LIVESTOCK AND DAIRYING</b>								
1	Improved breed	No.	-	-	-	-	-	-
2	Milk production	Liters	11	17	54.55	-	-	-
3	Artificial insemination	No.	-	7	-	-	-	-
4	Vaccination	No.	-	6	-	-	-	-
<b>POULTRY</b>								
5	Improved breed	No.	-	-	-	-	-	-
6	Broilers	No.	-	-	-	-	-	-
7	Egg production	No.	-	-	-	-	-	-
8	Vaccination	No.	-	-	-	-	-	-
<b>FISHERY DEVELOPMENT</b>								
9	Fish seed production	Qntl.	-	-	-	-	-	-
10	Fish production	Qntl.	-	-	-	-	-	-
<b>HOME SCIENCE</b>								
11	Toy making	No.	-	-	-	-	-	-
12	Pickles	Kg.	33	209	533.33	82	480	485.36
13	Bakery	Kg.	4	-	-	5	-	-
14	Jute items	No.	-	-	-	-	-	-
15	Papad/Bari/Jam/Jelly	Kg.	3	107	3466.61	17	250	1370.51
<b>TRAINING OF RURAL YOUTH</b>								
16	Motor binding	Placement No.	-	-	-	-	-	-
17	Engine repair	"	-	-	-	-	-	-
18	Black smithy	"	-	-	-	-	-	-
19	Carpentry	"	-	-	-	-	-	-
20	Masonry	"	-	-	-	-	-	-

BT = Before Training, AT = After Training

Table No. 10.5 [Contd...] [Non Farm Activities]

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Chhindwara [J.N.K.V.V.]</b>								
<b>LIVESTOCK AND DAIRYING</b>								
1	Improved breed	No.	-	2	-	-	-	-
2	Milk production	Liters	6	21	-	-	-	-
3	Artificial insemination	No.	-	2	-	-	-	-
4	Vaccination	No.	-	2	-	-	-	-
<b>POULTRY</b>								
5	Improved breed	No.	-	-	-	-	-	-
6	Broilers	No.	-	-	-	-	-	-
7	Egg production	No.	-	-	-	-	-	-
8	Vaccination	No.	-	-	-	-	-	-
<b>FISHERY DEVELOPMENT</b>								
9	Fish seed production	Qntl.	-	-	-	-	-	-
10	Fish production	Qntl.	-	-	-	-	-	-
<b>HOME SCIENCE</b>								
11	Toy making	No.	-	10	-	-	-	-
12	Pickles	Kg.	47	55	17.02	47	172	265.95
13	Bakery	Kg.	-	-	-	5	-	-
14	Jute items	No.	-	-	-	-	3	-
15	Papad/Bari/Jam/Jelly	Kg.	5	10	50.00	18	34	88.89
<b>TRAINING OF RURAL YOUTH</b>								
16	Motor binding	Placement No.	-	-	-	-	-	-

17	Engine repair	”	-	-	-	-	-	-
18	Black smithy	”	-	-	-	-	-	-
19	Carpentry	”	-	-	-	-	-	-
20	Masonary	”	-	-	-	-	-	-

**BT = Before Training, AT = After Training**

Table No. 10.5 [Contd...]

Non Farm Activities

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Shahdol, J.N.K.V.V.</b>								
<b>LIVESTOCK AND DAIRYING</b>								
1	Improved breed	No.	-	-	-	-	-	-
2	Milk production	Liters	-	-	-	-	-	-
3	Artificial insemination	No.	-	-	-	-	-	-
4	Vaccination	No.	-	-	-	-	-	-
<b>POULTRY</b>								
5	Improved breed	No.	-	-	-	-	-	-
6	Broilers	No.	-	-	-	-	-	-
7	Egg production	No.	-	-	-	-	-	-
8	Vaccination	No.	-	-	-	-	-	-
<b>FISHERY DEVELOPMENT</b>								
9	Fish seed production	Qntl.	-	-	-	-	-	-
10	Fish production	Qntl.	-	-	-	-	-	-
<b>HOME SCIENCE</b>								
11	Toy making	No.	4	5	25.00	-	-	-
12	Pickles	Kg.	30	92	206.67	16	76	375.00
13	Bakery	Kg.	-	2	-	-	4	-
14	Jute items	No.	-	-	-	-	-	-
15	Papad/Bari/Jam/Jelly	Kg.	1	21	2000.00	1	37	3600.00
<b>TRAINING OF RURAL YOUTH</b>								
16	Motor binding	Placement No.	2	3	50.00	1	2	100.00
17	Engine repair	”	-	-	-	-	-	-
18	Black smithy	”	-	-	-	-	-	-
19	Carpentry	”	-	-	-	-	-	-
20	Masonary	”	-	-	-	-	-	-

**BT = Before Training, AT = After Training**

Table No. 10.5 [Contd...]

## Non Farm Activities

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Tikamgarh, J.N.K.V.V.</b>								
<b>LIVESTOCK AND DAIRYING</b>								
1	Improved breed	No.	-	5	-	-	10	-
2	Milk production	Liters	13	12	7.69	19	31	63.16
3	Artificial insemination	No.	8	-	-	-	6	-
4	Vaccination	No.	-	-	-	1	4	300.00
<b>POULTRY</b>								
5	Improved breed	No.	-	-	-	-	-	-
6	Broilers	No.	-	-	-	-	1	-
7	Egg production	No.	-	-	-	-	-	-
8	Vaccination	No.	-	-	-	-	-	-
<b>FISHERY DEVELOPMENT</b>								
9	Fish seed production	Qntl.	-	-	-	-	-	-
10	Fish production	Qntl.	-	-	-	-	-	-
<b>HOME SCIENCE</b>								
11	Toy making	No.	-	-	-	-	10	-
12	Pickles	Kg.	57	196	243.86	89	164	84.27
13	Bakery	Kg.	-	-	-	-	-	-
14	Jute items	No.	-	-	-	-	-	-
15	Papad/Bari/Jam/Jelly	Kg.	5	79	1480.00	20	115	475.00
<b>TRAINING OF RURAL YOUTH</b>								
16	Motor binding	Placement No.	-	1	-	-	2	-
17	Engine repair	"	-	-	-	1	-	-
18	Black smithy	"	-	-	-	-	-	-
19	Carpentry	"	-	-	-	-	-	-
20	Masonary	"	-	-	-	-	-	-

BT = Before Training, AT = After Training

Table No. 10.5 [Contd...]

## Non Farm Activities

Sl. No.	Name of the KVK, Host Organisation Item of performance	Unit	Vocational Training					
			Adopted Villages			Cluster Villages		
			BT	AT	Percentage increase over B.T.	BT	AT	Percentage increase over B.T.
1	2	3	4	5	6	7	8	9
<b>K.V.K. Bhopal [CIAE]</b>								
<b>LIVESTOCK AND DAIRYING</b>								
1	Improved breed	No.	-	17	-	7	26	271.63
2	Milk production	Liters	14	36	157.14	48	117	143.75
3	Artificial insemination	No.	-	6	-	1	18	1700.00
4	Vaccination	No.	-	12	-	15	33	120.00
<b>POULTRY</b>								
5	Improved breed	No.	-	1000	-	-	-	-
6	Broilers	No.	-	1000	-	-	-	-
7	Egg production	No.	-	-	-	-	-	-
8	Vaccination	No.	-	1000	-	-	-	-
<b>FISHERY DEVELOPMENT</b>								
9	Fish seed production	Qntl.	-	-	-	-	-	-
10	Fish production	Qntl.	-	-	-	-	-	-
<b>HOME SCIENCE</b>								
11	Toy making	No.	-	2	-	-	-	-
12	Pickles	Kg.	70	141	101.43	32	104	225.00
13	Bakery	Kg.	54	112	107.41	2	8	300.00
14	Jute items	No.	-	-	-	-	-	-
15	Papad/Bari/Jam/Jelly	Kg.	5	98	1960	8	43	437.50
<b>TRAINING OF RURAL YOUTH</b>								
16	Motor binding	Placement No.	-	6	-	-	4	-
17	Engine repair	"	-	2	-	-	2	-
18	Black smithy	"	-	-	-	-	-	-
19	Carpentry	"	-	-	-	-	-	-
20	Masonry	"	-	-	-	-	-	-

**BT = Before Training, AT = After Training**

10.52 The sequence of tabular presentation as well as write-up are the same as adopted for Agriculture Production.

**NON FARM ACTIVITIES – K.V.K., Satna, run by an N.G.O.**

10.53 The above table shows that regarding poultry activities the performance is only marginal as for improved breed only 38 number of improved variety of birds have been produced in after training situations in adopted villages while vaccination of only 4 animals have been done.

10.54 Regarding home science activities substantial physical output in seen in case of preparation of pickles in after training situations in both adopted and cluster villages wherein percentage increase in output in after training situations is 2040.00 and 923.53 respectively.

10.55 An regards training of rural youth, one and two persons respectively have got placement in after training situation in cluster villages pertaining to trades like motor binding and engine repairs respectively.

**10.56 No vocational trainings on livestock and dairy and fishery have been organised with the result the impact of K.V.Ks. effort is not visible.**

**NON FARM ACTIVITIES – K.V.K., Indore, run by an N.G.O.**

10.57 The above table shows a marginal performance in case of livestock and dairy activities wherein milk production to the tune of 17 liters have been recorded in after training situations as compared to 11 liters in B.T. situations in adopted villages of K.V.K. Indore covered under the study. Insignificant performance is visualized in case of artificial insemination and vaccination.

10.58 Regarding home science activities substantial work has been done in case of pickles wherein percentage increase in pickle preparation in case of A.T. situations in adopted and cluster villages is compared to B.T. situations is 533.33 and 485.36 respectively while in case of preparation of papad/bari/jam/jelly the percentage increase is 3466.61 and 1370.51 respectively.

**10.59 No vocational trainings have been organised on subjects like poultry, fishery development and training of rural youth, with the result the impact of K.V.Ks. effort will not be visible.**

**NON FARM ACTIVITIES – K.V.K., CHHINDWARA, run by J.N.K.V.V., Jabalpur**

10.60 In the field of non-farm activities concentration of K.V.K.Chhindwara is more on home science activities, particularly for the preparation of pickles and papad/bari/jam/jelly etc. where the percentage increase in physical output is, 65.95 for pickles in after training situations of cluster villages compared to B.T. situations and 88.89 for papad/bari/jam/jelly in after training situations of cluster villages compared to B.T. situations. For adopted villages also the performance regarding these products is fairly good.

10.61 The above table further reveals a sketchy performance for livestock and dairy activities with not much tangible results.

**10.62 No vocational trainings have been organised on subjects like poultry, fishery development, and training of rural youth as revealed by the survey results.**

**NON FARM ACTIVITIES – K.V.K., Shahdol, run by an N.G.O.**

10.63 The above table shows that again in case of K.V.K., Shahdol the concentration over home science activities is foremost specially over preparation of pickles and papad/bari/jam/jelly for which physical performance in after training conditions for both adopted and cluster villages as compared to before training conditions is fairly substantial.

10.64 Only marginal results of vocational training regarding training of rural youth is visible as in motor binding trade placements have been recorded for adopted and cluster villages.

**10.65 No vocational trainings have been organised on subjects like livestock and dairying, poultry and fishery development.**

**NON FARM ACTIVITIES – K.V.K., TIKAMGARH, RUN BY AN J.N.K.V.V., Jabalpur**

10.66 In case of K.V.K. Tikamgarh, vocational training on limited scale has been organised for livestock and dairy activities with visible results regarding milk production and vaccination with 12 and 31 liters of milk production respectively in adopted and cluster villages in A.T. situations. The result, however is not impressive.

- 10.67 Regarding home science activities substantial work has been done in case of preparation of pickles and papad/bari/jam/jelly etc with tangible results in after training situations both for adopted and cluster villages, though on limited scale.
- 10.68 Regarding training of rural youth, vocational training resulting in marginal placement of one and two persons respectively for adopted and cluster villages have been achieved for motor binding trade.
- 10.69 No vocational trainings have been organised for subjects like poultry and fishery.**

#### **NON FARM ACTIVITIES – K.V.K., BHOPAL, RUN BY C.I.A.E., GOVT. OF INDIA**

- 10.70 Regarding livestock and dairy, impressive results are visualized as a result of vocational training in the fields of improved breed production, milk production and vaccination particularly in cluster villages where the physical results are far in excess in A.T. situation as compared to B.T. conditions.
- 10.71 In adopted villages vocational trainings have been organised for poultry activities relating to improved breed and broiler production and vaccination with tangible results in after training situations with nil performance in B.T. conditions.
- 10.72 Regarding home science activities, tangible results have been achieved as a result of vocational training, particularly for products like pickles, bakery items and preparation of papad/bari/jam/jelly etc. wherein the after training results are far in excess of before training results both for adopted and cluster villages.
- 10.73 No vocational trainings have been organised for any of the activities relating to fishery development.
- 10.74 The conclusion that can be drawn from above narration is that in all the 6 number of K.V.Ks. covered under the study the vocational trainings for home science activities have been organised with fair results. Very marginal results have been derived from vocational trainings organised for livestock and dairying that too not from all the K.V.Ks. Similar are the results of poultry and training of rural youth vocational trainings have not at all been organised or marginally organised with not much tangible results. For fishery related activities no vocational trainings have been organised for any of six K.V.Ks. covered under the study.**
- 10.75 In the following table an attempt has been made to present the performance regarding home science activities in summary form to facilitate a view of relative performance among all the six K.V.Ks. under study. Separate performances in the categories of adopted and cluster villages have not be given as it has already been presented in table no. 10.5. Tangible results in physical terms from adopted and cluster villages have been taken for before and after training situations.

Table No. 10.6  
Home Science Activities – Comparative Performance Adopted/Cluster Villages

Sl. No	Item	Unit	K.V.K. Satna [NGO]			K.V.K. Indore [NGO]			K.V.K. Chhindwara J.N.K.V.V.		
			BT	AT	% increase over B.T.	BT	AT	% increase over B.T.	BT	AT	% increase over B.T.
1	2	3	4	5	6	7	8	9	10	11	12
1	Toy making	No.								10	
2	Pickles	Kg.	17	174	923.53	82	480	485.36	47	172	265.95
3	Backery	Kg.	-	3	-	5	-	-	-	-	-
4	Jute items	No.	-	-	-	-	-	-	-	3	-
5	Papad/Bari/Jam/Jelly	Kg.	-	66	-	17	250	1370.51	18	34	88.89

Table No. 10.6 [Contd...]  
Home Science Activities – Comparative Performance Adopted/Cluster Villages

Sl. No	Item	Unit	K.V.K. Shahdol [J.N.K.V.V.]			K.V.K. Tikamgarh [J.N.K.V.V.]			K.V.K. Bhopal [C.I.A.E., GoI]		
			BT	AT	% increase over B.T.	BT	AT	% increase over B.T.	BT	AT	% increase over B.T.
1	2	3	13	14	15	16	17	18	19	20	21
1	Toy making	No.	4	5	25.00		10	-	-	2	-
2	Pickles	Kg.	30	92	206.67	57	196	243.86	32	104	225.00
3	Backery	Kg.	-	4	-	-	-	-	54	112	107.41
4	Jute items	No.	1	37	3600.00	-	-	-	-	-	-
5	Papad/Bari/Jam/Jelly	Kg.				20	115	475.80	5	98	1960.00

10.76 The above table clearly shows that in activities like preparation of pickles and papad/bari/jam/jelly the results of the vocational training are clearly visible as the persons of the sample villages have shown considerable interest in such activities. After formation of Self Help Groups in villages in Madhya Pradesh through government initiatives, have brought an awareness among the women which is evident from the fact that women are coming forward for performing economic activities for family income augmentation resulting in performance of activities like preparation of pickles, papad etc as revealed by the information contained in the above table.



## **Chapter Eleven**

### **The Recommendations**

Equity and social justice being the important destinations of the Tenth Plan, the agriculture development has been viewed as the core element of growth process since the growth in this sector is likely to lead to widest spread of benefits, especially the rural poor, including agriculture labour. Also since the majority of woman workers are engaged in agriculture, investments in this sector have enormous implications for gender equality as well. K.V.Ks. being grass root institutions for transfer of agriculture and related technology covering poorest of the poor, their importance therefore, can not be over emphasized. It is, possible, that a few of the K.V.Ks. may not have come-up as per expectations but their set-backs can not be termed as failures as these institutions have to grapple with both farming and non-farming activities of every sort where the existence of regret is obvious because of poverty. The only way to improve their efficiency is to guide them, keeping in view the operational difficulties they face. **In what follows an attempt has been made to list out certain recommendations based on the results of the study in the categories of;**

- 1. Recommendations Regarding Technical Functions**
- 2. Recommendations Regarding Administrative Functions**

#### **1. RECOMMENDATIONS REGARDING TECHNICAL FUNCTIONS**

- The basic mandates of the K.V.Ks. are : Vocational Training, Front Line Demonstration and On Farm testing [We are not defining these functions as these have been defined in the main text of the report] through which agriculture and its allied services related technologies are transferred to farming communities. It has been seen during the field visits that not much logical sequence is being followed for imparting such trainings. It is therefore, recommended that vocational training normally attended by the large group of farmers may constitute the frame of the subsequent trainings i.e. from the group of persons receiving vocational training we may identify individuals on whose fields Front Line Demonstrations and On Farm Testings are to be organised. While selecting the farms, proper care must be given to incorporate large, medium, small and marginal farmers from sample communities of S.C., S.T., O.B.Cs. and others with proper selection of technologies so that farming groups of all the sections of the society are covered and benefited. May be some of the K.V.Ks. might be following such practice but a proper guide line from the I.C.A.R. will definitely stream line the procedure on uniform basis with instructions of following up functions by Zonal Coordination Officer [Z.Cs.] at least on sample basis. During the course of survey, it has been seen that a few of K.V.Ks. have not organised F.L.Ds. and O.F.Ts. in cluster group of villages which are, basically, percolating agents. It is, therefore, necessary that all the aforesaid three training programmes must be organised in both adopted and cluster group of villages to assure wide spread forward linkages of

such training activities. **What is, therefore, required is the preparation of annual calendar of training programmes to be imparted by K.V.Ks. with proper inter linkages and may be forwarded to the respective Zonal Coordination Offices facilitating them to perform following-up of such activities. While preparing the calendar the K.V.K. scientists should take the opinion of Dy. Director Agriculture of the district so that overlapping of activities is avoided.**

- The K.V.Ks. are supposed to cover the farming communities of the entire district in terms of transfer of agriculture and its allied services related technologies. In Madhya Pradesh where an average of around 400 villages exist in every district, the entire coverage of the district by seven or eight odd technical personnel will take ages. It is, therefore, necessary to evolve a set method to cover the areas where there is no direct intervention of K.V.K. **For this purpose, it would, perhaps, be desirable to organize work-shops twice in a year, at Development Block level where farmers from areas of non-intervention [preferably two representatives from each village] may participate where the farmers from adopted and cluster villages, benefited by the trainings of K.V.K. will also be present. A frank interaction between such group of farmers will certainly induce the cultivators of non-intervention area to adopt the improved practices of cultivation. Such interactions may be organised in batches where the presence of the officials of line departments of the district viz. Agriculture, Horticulture, Animal Husbandry, Fishery, Rural Development etc. will be useful. The modalities for organisation of such workshops may be sorted out by the I.C.A.R. and uniform instructions may flow from the top to be percolated to K.V.Ks. through Z.Cs.**
- During the course of survey the respondents have very **strongly argued for arranging training on marketing of agricultural produce to fetch fair return of the product. For this purpose it will be worthwhile on the part of the K.V.K. personnel to organize such trainings in liaison with the Krishi Upaj Mandies which are normally located at district/tahsil headquarters. The I.C.A.R. may think it proper to include the subject of ‘Marketing of Agriculture Produce’ in the mandates of K.V.K. Suggestions have also come to introduce a subject on production of by-products of crops. Though the suggestion is important, its implementation will require processing activities requiring specific knowledge. The I.C.A.R. may keep an option with K.V.Ks. having knowledge of processing activities to arrange training on this subject.**
- The survey results have clearly shown that the rate of participation in trainings is maximum for agronomical and horticulture crops and for home science activities in which female participation is substantial for augmentation of household income. The participation in subjects like animal husbandry and

dairying, fisheries, agro-forestry, organic farming, training of rural youth and watershed activities is either marginal or nil, though these functions are very important for any rural economy. The survey results clearly, thus, shows that cultivators of our sample area are not very confident about activities allied to agriculture and are inclined to enhance income through direct participation in crop production. **Since the activities other than agriculture production can also not be neglected what is required is prioritization of activities by each K.V.K. and arrange trainings accordingly. The priority list of the individual K.V.Ks. will differ and therefore, they should be given sufficient latitude to pursue their activities with an eye over the fact that trainings regarding animal husbandry and dairying, agro-forestry and watershed activities should not be altogether left as these are the basic supportive functions of agriculture though having low place in their priority ladder.** The low response to animal husbandry and dairying is mainly due to the fact that in villages in general the milch animals are reared mainly for household requirements as higher production is constrained by road connectivity. Therefore, the villagers are usually not interested in getting training regarding animal husbandry and dairying though extremely important parameters of agricultural diversification. **So what is required basically is the development of road infrastructure for development of horticulture and dairy etc the product of which are perishable in nature.**

- It has been experienced over the years that land and water are the crucial constraints on our effort to expand agriculture production. **It will, therefore, be worthwhile to cover under cultivation the waste land or cultivable land excluding fallow land with non-conventional crops mainly horticultural which can be grown over such areas.** The K.V.K. scientists may concentrate over this issue and organize trainings involving technologies suited for such areas. The I.C.A.R. may expand the mandates of K.V.K. to cover, particularly, the development of waste land area.
- The K.V.K. may play an important role in imparting training to Self Help Groups particularly for subjects regarding Home Science. For this purpose also the Chief Executive Officer of Zila Panchayat may keep a track of K.V.Ks. for inviting them in such meetings.
- To intensify the spread effects of K.V.Ks efforts, **an inter village interaction on quarterly basis may be organised** where the role of the K.V.K. scientists may be that of a coordinator for disseminating the technological achievements of not only K.V.K. but that of other line departments having substantial impact over efficient functioning of agriculture and its allied activities. This function may be made mandatory by the I.C.A.R. through necessary executive instructions taking into consideration the probable role of Gram Panchayat.

- A modal village at each Development Block level may be identified by the K.V.K. **on permanent basis** where the impact of all the technological advancement on the fields may be disseminated covering the efforts of K.V.K. and line departments with placement of knowledgeable person who can explain the mode of implementation of such technologies to the farming community who visit the village. A proper publicity through print and electronic media should precede before opening-up of such villages for visits of the cultivators. The I.C.A.R. may take-up the issue along with State Government for sorting out the modalities. Here again the role of the K.V.K. scientists will be that of a coordinator.
- It has been realized over the years that there exists a substantial time-lag between creation of tested technology and its application in fields. A proper net work must, therefore, be developed for immediate flow of the contents of such technologies from the research institutes to the K.V.Ks. and line departments as well for faster implementation. The modalities in this regard may be sorted out by I.C.A.R. in consultation with research institutions.
- It has been seen during the course of survey that women are mainly engaged in agriculture for performing manual work. The K.V.Ks. should organize special vocational training for such women workers to facilitate them in performing manual functions.
- It has been felt that the K.V.K. scientists do not have any target in physical sense to be achieved on the basis of which their efforts can be evaluated and can be made answerable for gap in attainment of results. For this purpose, before sanctioning any new K.V.K., Development Block wise socio-economic indicators covering basic mandates of the K.V.K. may be compiled which will serve as base line data showing the socio-economic status of a Development Block at a point of time. Subsequently a Five Year Plan in annual break-ups may be prepared in consultation with Z.Cs. showing the level of targets to be achieved by the K.V.Ks. in annual break-ups. The work is complex as indices both farming and no-farming activities shall have to be prepared on the basis of availability of secondary information For this purpose the services of the N.G.Os. can be utilized for collection of base line information and preparation of Five Year Plans.

## **2. RECOMMENDATIONS REGARDING ADMINISTRATIVE FUNCTIONS**

- **The budget structure** of the K.V.Ks. perhaps, required to be changed by allocation of sufficient provisions for performance of technical functions including area specific research. The share of P.O.L. also needs to be enhanced for constant contact with farming community to keep-up their level of confidence which is the most important factor for success of K.V.K. programme.

- Part sanction of the posts, as far as possible, be avoided. **It is desirable, therefore, to equip completely any K.V.K. at the time of its sanction, both personnel and equipment wise, so that the institution may start functioning with full vigour. A dilapidated K.V.K. sends wrong signals to the farming community who lose confidence about the organisation because of lack of timely assistance, the regaining of which is very difficult, even with every facility, subsequently provided.** Moreover, since the K.V.K. has to cover the entire district, a niggardly provision in the beginning will only stagger the achievement of targeted objectives.
- At times a vacuum is created in K.V.Ks. because of sudden resignations of technical personnel. In such cases the K.V.Ks. may be allowed to employ the personnel immediately **with a clause of subject to confirmation by the Interview Board.** This will immensely facilitate the continuous functioning of K.V.K. as minimum of three months are required to fill-in the posts by following laid down procedures. Till that time, if immediate appointment is not allowed, the working of any K.V.K. is awfully hampered.
- The K.V.K. scientists are supposed to function in liaison with link offices located at district level. For this purpose, it is perhaps necessary that the K.V.K. should be a member of District Planning Committee, where the Annual/Five Yearly plan proposals are prepared for district sector schemes covering wide range of subjects including agriculture and allied activities. Since K.V.K. scientists have the feel of grass root realities, their contribution in preparing district plan proposals will be immense particularly for preparation of area specific locational plan for economic and social infrastructure. The initiative, in this case, may be mooted by I.C.A.R. by sending request to the State Government of Madhya Pradesh in Planning Department from where the instructions may flow to the district administrations.
- Any training programme pertaining to agriculture and its allied activities organised at district level must be attended by the K.V.K. scientists to have holistic knowledge about training activities being pursued by district administration. For this purpose the line departments at district level may keep the name of the K.V.K. in their mailing list.

## **ADDENDUM**

**This write up has been added after the power point presentation containing a few recommendations of Planning Commission.**

## **IMPACT STUDY ON DEVELOPMENT OF AGRICULTURE AND ALLIED ACTIVITIES THROUGH KRISHI VIGYAN KENDRA IN MADHYA PRADESH.**

Indian council of Agriculture Research introduced the concept of establishing the krishi vigyan Kendra in the rural area of the country during the fifth five Year plan. There were 18 KVK established in the country during the fifth five Year plan period and the number of KVKs increased to 261 by the end of the 1999. The number of the KVKs in Madhya Pradesh was 34 as on 2003-04. The KVKs have been introduced as per the recommendation of Dr. Mohan Sinha Mehta committees, 1974.

The Planning Commission GOI have assigned a study to assess the impact of KVKs on development of the Agriculture and allied activities in Madhya Pradesh to the Centre For Rural Development and Environment (CRDE) Bhopal. The CRDE have conducted this study and submitted its report to the Planning Commission GOI in the year 2006. Further at the time of power point presentation of study report the officers of the Planning Commission GOI have suggested the CRDE to collect some additional information related to the working of these KVKs. The CRDE have collected the additional information as per the questionnaires approved by the P.C. GOI. During power point presentation the committee have suggested to collect the information on the following points.

1. Selection of the beneficiaries
2. Selection of site for demonstration
3. Do the KVKs incorporate the need of line department in their action plan?
4. Participation of line department in Scientific Advisory Committee meeting.
5. The role and responsibilities of the KVK in extending of the improved agricultural practices.
6. The linkage of the scientist of the KVK with other departments.
7. Basis of the evolution of the KVK.
8. Do KVK and ATMA have any linkage?
9. Role of the KVK in providing consultancy to the groups of farmers developed by the ATMA.
10. Development and demonstration of Agriculture technique by KVK.
11. The Role of the KVK in preparing the composite plans according to sub-climatic zones of the M.P. ,Do the KVK makes any effort to prepare a converged Programme of Agriculture technique as per sub climatic Zones.
12. Do the KVK propagate their success stories on agenda basis?
13. Inclusion of marginal farmer /small farmer and women in KVK activities?

The outcomes of this supplementary survey are high lighted below.

### **1. Selection of the beneficiaries-**

- 1.1 In all the surveyed KVKs, except in Satna KVK, they obtained the opinion of the line department such as Agriculture, Horticulture, Animal Husbandry, Poultry development, Sericulture, Fisheries, women and child development department, Zila Panchayat etc., in

selection of beneficiaries to train them in the activities of the KVKs. like vocational training, Front line demonstration and On Farm Testing/ training etc.

- 1.2 Out of the six surveyed KVKs only four KVKs i.e. Indore, Chhindwada, Tikamgarh and Shahdol used to obtain the opinion of Agriculture department. As regards the opinion of Animal husbandry and Horticulture department only three KVKs i.e. Indore, Tikamgarh and Shahdol takes the opinion. Only one KVK i.e. Tikamgarh takes the opinion of women and child development department and only shahdol KVK consulted the Zila Pnchayat for their opinion. None of the KVK consulted the other remaining departments.
- 1.3 The five KVK obtained the opinion of the line department on the activities regarding vocational training except KVK, Satna. As regards opinion on front line demonstration only four KVK i.e. Bhopal, Indore, Chhindwada and Tikamgarh are found serious. Out of Six surveyed KVK only three KVK (50 percent) Bhopal, Indore and Chhindwada obtained the opinion regarding On Farm Testing activities. As regards other activities like farmer fair, farmer symposium, farmers day etc., except Satna KVK all the surveyed KVK obtained the opinion of the line department .The reason of not obtaining the opinion of the departments the KVK at Satna informed that there is no need to take opinion of the line department.

## **2. Selection of site for demonstration -:**

- 2.1 In response of the question that while selecting the site for FLD and OFT, whether the opinion of the line department is taken or not, the KVK at Bhopal and Satna said No, they do not obtained the opinion of the line department, whereas the other four KVK (65 percent) have obtained the opinion.
- 2.2 The four KVKs who obtained the opinion of the department have informed that such departments are Agriculture, Horticulture, Animal Husbandry and women and child development department. The opinion from other line department has not been obtained.
- 2.3 The four KVKs who have obtained the opinion of the departments informed that they obtained the opinion on FLD, Farmers fair, Farmer symposium and on Farmers day activities only. Nobody obtained the opinion of the department regarding On Field Testing activities.
- 2.4 The KVK Bhopal and Satna who have not obtained the opinion of the department informed the reason that there is no need of taking the opinion of the line department on the activities of KVK. The Bhopal KVK, however, added that the concerned department does not cooperate in time.

## **3. Do the KVKs incorporate the need of line department in their action plan?**

- 3.1 Except KVK Satna all the other five KVK informed that they include the needs of the line departments in their action plan. Their percentage is 85percent. KVK Satna informed that they follow their own mandates.



3.2 All the five KVKs included the needs of Agriculture and Horticulture department and only Indore and Tikamgarh KVK included the needs of Animal husbandry department, whereas only Indore KVKs includes the needs of poultry and women and child development department needs also and KVK Shahdol includes the needs of Zila Panchayat also.

3.3 In response to the question whether the inclusion is sufficient or not, only two KVK Indore and Tikamgarh informed that it is sufficient, whereas other four KVK do not agree with this.

3.4 The reason for insufficient inclusion is reported to be the limitation of manpower in KVKs.

#### **4. Participation of line department in Scientific Advisory Committee meeting -:**

4.1 All the surveyed KVKs informed that the SAC meeting is conducted regularly but only once in the year.

4.2 In KVK Shahdol all of the nine-line department participate in the SAC meeting. In KVK Satna and Tikamgarh except the sericulture department, the other entire line department attends the SAC meeting. In Indore KVK except Fisheries, sericulture and Zila panchayat department, all the other department attended the SAC meeting. In Bhopal KVK except Poultry Development Department, Fisheries, Sericulture and Zila Panchayat, all the other 5 department attended the SAC meeting. In Chhindwada KVK only Agriculture Animal husbandry, poultry development department and Horticulture department attended the SAC meeting; the other 5 departments do not attend the SAC meeting. Agriculture Animal husbandry and Horticulture are such departments who attend the SAC meeting held by all the surveyed KVKs.

4.3 As regards non-participation of the department in the SAC meeting, the KVK at Chhindwada informed that the concerned department do not give importance to the meeting. The views of the other KVKs like Bhopal and Indor are also almost the same.

#### **5. The role and responsibilities of the KVK in extending the improved agricultural practices -:**

5.1 In response to the question whether the scientists of KVK feel their responsibilities to extend the improved Agricultural practices. All the KVK informed it positive. It seems that the Scientists of the KVK are responsible to perform their duties. The KVKs informed that they fulfill their responsibilities through various activities of the KVK, like training of the farmers, demonstration, meeting, field day exhibition etc.

5.2 In response to the question whether it is sufficient or not, out of six surveyed KVK three (50 percent) says it is sufficient and other three says it is insufficient.

5.3 The three KVK accepted that they face the problem of budget and staff provided to them and the other reason is socioeconomic variables of the respondents.

#### **6. The linkage of the scientists of the KVK with other departments.**

6.1 In response to the question whether the departments invited KVK scientists as resource person in their programmes, all the surveyed KVK informed that the department invite them as resource person in their activities. Mostly the department like Agriculture, Horticulture, Animal husbandry, Neharu yuva Kendra and the banks etc. invited the scientist in their programme.

## **7. Basis of the evolution of the KVK -:**

7.1 Staff – Whether there is sufficient staff or not in the KVK?

The KVK Bhopal, Indore, and Tikamgarh informed that the staff is sufficient as per the mandate of the KVK, but in the practice the staff is insufficient, looking to the activities of the KVK. The other KVK chhindwada, Satna and Shahdol informed that they do not have sufficient staff. It shows that only 50 percent KVK have the sufficient staff for their activities.

7.2 Whether the working hours is fixed or not ?

Out of six-surveyed KVK four KVKs have responded that they have fixed the working hours of the staff and the remaining two KVKs Satna and Shahdol have not fixed the working hours for the staff.

7.3 Whether any programme is chalked out for the scientists regarding their office time and field visit. In response to the question all the KVK informed that they have fixed the time schedule for the scientists. It shows that all the 100 percent KVK used to chalk out the schedule of office working as well as of field visit.

7.4 Whether the meeting of KVK is regularly held to review the working of the KVK? All the surveyed KVK informed that the review meeting is regularly held by the KVK.

7.5 Whether the technical works done as per the working plan ?

The 100 percent surveyed KVK responded that all the technical works carried out as per the working plan of the KVK.

7.6 The linkage of the scientist of the KVK with other departments.

On this point all the surveyed KVK informed that their scientist have good relation with other departments.

7.7 Whether PRA technique is used in preparing the working plan?

In response to this question all the surveyed KVK have accepted that they use, the PRA technique in preparing their action plan.

7.8 Which of the techniques are utilized in making propaganda and publicity of the Agriculture technology?

Almost all the surveyed KVK informed that apart from utilizing the methods of Vocational Training, FLD, OFT, Farmers fair, Farmers day, Symposium of farmer, radio talk, TV broadcasting etc., they adopted the techniques of Farmer tour, Farmers meeting, distribution of literature in local language to the farmers, and efforts through the personal relation with farmers. Agriculture clinic and displaying of cassatas on developed Agriculture techniques are also adopted.

7.9 Do the scientists have right to take decision for the better performance of their function?

In response to the question all the surveyed KVK informed that the scientists have the right to take decision regarding better performance of their functions.

**8. Do KVK and ATMA have any linkage?**

8.1 Only three KVKs i.e. Chhindwada, Tikamgarh and Shahdol accepted that they have the linkage with ATMA . The remaining other KVK informed that ATMA is not functioning in their district .KVK Chhindwada informed that they have the linkage with the activities of the ATMA through the exhibition and demonstration, KVK Tikamgarh informed that they have linkage through SREP (Strategic Research Extension programme ) and Shahdol KVK informed that the activities of the ATMA have recently started in Shahdol district the KVK have given the training to the farmer groups of ATMA.

**9. Role of the KVK in providing consultancy to the groups of farmers developed by the ATMA .**

9.1 In districts of Bhopal, Satna and Indore there is no ATMA activities so has far been started. In the other three district where the ATMA is functioning or have recently started, the farmers groups are under processing and where the groups have been formed, the KVK started demonstration to the groups. They are given the on spot advice during field visit and through demo.

**10. Development and demonstration of Agriculture technique by KVK.**

10.1 Whether the KVK demonstrate the Agriculture technique ?

In response to the question all the surveyed KVK accepted that they do it through the demonstration ,OFT, Farmer fair and through Symposium etc..

**11 The Role of the KVK in preparing the composite plans according to sub-climatic zones of the M.P. ,Do the KVK makes any effort to prepare a converged Programme of Agriculture technique as per sub climatic Zones ?**

11.1 All the surveyed KVK accepted that they do the conservation of Agri- Techniques according to composite plan and sub climate Zone of M.P.

11.2 KVK Bhopal told that they do it through selection of techniques according to the variables of climate Zone .The KVK Indore informed that they do it by OFT, and by cropping Patterns according to climate. The Chhindwada KVK informed that they do it according to the need of the soil and the crop through demonstration. The KVK Tikamgarh told that they perform it on major crops of rabi season like gram, wheat and linseed and of the kharif season on soybean sesame etc.and in horticulture on zinger,

groundnut ,sweet potato and potato colocarchia .KVK satna informed that they perform the conservation techniques according to the programme based on regional requirement. The KVK shahadol informed that they do the conservation according to soil and climate and the infrastructure facilities available with the farmers.

**12. Do the KVK propagate their success stories on agenda basis?**

12.1 In response to this question all the KVK agreed that they do the propaganda and the publicity of their success stories on regular basis through electronic media, print media and documentation .Some of the KVK prepare the C.D. also of their success stories .

**13. Inclusion of marginal farmer /small farmer and women in KVK activities?**

13.1 All the surveyed KVK agreed that they include the marginal farmer small farmer and women in their activities through the Vocational Training FLD, OFT and other programme like farmer day, farmer symposium etc.. Although there is no any ratio is fixed for this. Sometimes the farmers male as well as female do not participate in these activities due to socio-economic barriers. On the other hand it appears that the KVKs also do not make sincere efforts in this connection

**The investigators of the CRDE consulted the KVK I/c officers on some extra points other than the questionnaire. Their remarks are highlight below.**

**KVK Bhopal** – Other department do not help KVK except Agriculture and Horticulture who help in FLD .The KVK require more staff than sanctioned by ICAR.

**KVK Indore** - Deputy Director Horticulture has expressed the views that in selection of villages and implementation of Horticulture, the KVK should cooperate enough which is not being done at present. DDA told that the participation of female farmers should be increased in KVK activities. Deputy Director, Animal Husbandry told that the KVK invite them as per their need or on the occasion of some key activities. The representative of the Deputy Director, Animal Husbandry attends the KVK programme. But the KVK do not invite them in FLD & OFT and while selecting the village / beneficiaries.

**KVK Chhindwada** – Agriculture department cooperates properly in the OFT activities. The rural agriculture extension officer and the scientists of the KVK used to go together in the demo. In the monthly workshop of Agriculture department they discuss the problem with KVK Scientists, whenever the necessity arises they organize the joint tour to the farmer's fields. While organizing the agriculture fair (Krishak mela) and exhibition the KVK and the department organize the activities jointly . The KVK scientist attends the activities as a subject matter specialist. In the SAC meeting of the KVK the officer of the departments do participate. ATMA has recently started in the district. The KVK scientist in the activities of ATMA organized the demos. They will provide the training to the farmers in the ATMA activities. After farming the groups the scientist of KVK

participates in the farmers training programme organized by the Agriculture Department. The opinion of the department is that the scientist of the KVK do not go to field area until and unless they are called for. The Department have suggested that the scientists of KVK should go in to field regularly. Deputy Director, A.H. told that they participate in the activities of the KVK. The doctor of the department goes to teach internee trainees in the KVK. They also participate in kisan mela and the Animal husbandry camp organized jointly by the Department and the KVK. The representative of the department attends the SAC meeting of the KVK regularly. Asstt. Director, Horticulture told that the scientist of KVK participated as an expert in the farmers training and kisan mela programme. The department is not aware of the FLD and OFT activities of the KVK. They attend the SAC meeting.

**KVK Tikamgarh** – Deputy Director, Agriculture told that they participate in the activities of KVK at their own interest. The KVK do not call them. There is no linkage with Deputy Director, Agriculture. The training of RA E O is organized by the KVK. A.H./ Vet. Department told that the KVK call them to attend the activities.

Fisheries – The KVK do not call them in their activities, even in the SAC meeting also they are not invited.

Horticulture – KVK invites the officers of Horticulture department. But they do not call them in selection of villages or in the FLD of Zinger crop.

**KVK Satna** - The opinion of the Agriculture department is not fair regarding the KVK. They have no much interaction in between their activities. But whenever the scientist of the KVK are called for they attended the department activities. But KVK do not call them to participate in KVK programme.

**KVK Shahdol** – Animal Husbandry Department officer attended the meeting of the KVK. They were present in farmers training programme and kisan mela, but they do not know about FLD or OFT or any other activities of KVK.

## CONCLUSION OF THE STUDY AND RECOMMENDATION

1. All the surveyed KVKs do not obtained the opinion of all the line department while selecting the beneficiaries to impart them the vocational training in KVK activities. Since the KVK activities are is mostly dependent on the line department cooperation, hence their cooperation and opinion is very important. It is, therefore, suggested that the ICAR may instruct all the KVKs in Madhya pradesh in this connection. Secondly, the state Govt. may also be requested to instruct all the line department at the district level whose activities are corelated to the activities of the KVKs, so that the rural poors marginal as well as small farmers in the area could be benefited in more numbers.
2. While selecting the site for FLD and OFT activities of the KVKs, the study revealed that only 65 percent KVKs obtained the opinion of the line department regarding this activity. The FLD and OFT are the important activities of the KVKs, the cooperation of the line department must be secured so that the farmer could also be impressed with these activities. For this purpose instruction may be issued to the KVKs.
3. It has been found through the study that about 85 percent of the surveyed KVKs include the needs of the line department while formulating the action plan. Efforts should be made that all the KVKs follow the mandates of the ICAR.
4. The scientific Advisory committee meeting is one of the key function of the KVKs. During the survey it has been found that all the surveyed KVKs organized the SAC meeting once in a year only, which seems to be insufficient, because in the SAC meeting the function of the KVKs are assessed as well as the suggestions of the line departments are also reflected in this meeting regarding the activities of the KVKs. It is, therefore, suggested that this meeting may kindly be held at least twice in a year. One before making preparation for kharif crop and another before the Rabi crop so that the suggestions of the line department could be kept in view, while implementing both the cropping season patterns. It is therefore requested that instructions may kindly be issued to the state govt. that in the SAC meeting of the KVKs, all the district level line department officers must attend the meeting.
5. While extending the improved agricultural technique through the KVKs it is found that the scientists of all the KVKs felt their responsibilities in providing these techniques, but in the 50 percent KVKs the scientists feel that still more efforts in this direction is to be done. For this purpose both the budget and staff of the KVKs should be increased. If the staffing patterns in the KVKs is not possible to be increased, the KVKs may be permitted to appoint some technical persons /passed out unemployed students of Agriculture collages on contract basis with a view to enhance the activities of KVKs, because at present in a district only one KVK is working and looking to the vast area of a district, the staff provided at present to the KVKs is too much insufficient. For this purpose only the budget of the KVKs could be increased. In the surveyed 50 percent KVKs they felt the need of additional staff.

6. At present the linkage of the scientists of the KVKs with the line departments is found to be satisfactory but they should be asked to interact more sincerely in the activities of the line department so that the importance of the KVKs could be established as like as mini Agriculture University in the district.
7. As regards the propaganda and publicity of the activities of the KVKs it is suggested that through the local print media and the T.V. channels, the activities of the KVKs could be broadcasted every monthly. The scientists of the KVKs could be encouraged to publish their activities in the local news paper frequently, so that more and more farmers could be benefited with the activities of the KVKs. The Zonal Coordinator of the ICAR could be given the responsibilities to keep a watch on the scientists of the KVKs.
8. The activities of ATMA have not yet started in all districts in Madhya Pradesh state. In some of the district where it has been stated, it is still in the prenatal stage.
9. As regards inclusion of marginal farmers, small farmers and farm women in KVK activities, sometimes they do not participate in these activities due to reason more than one, either they remain busy in some of the other economic activities or in some socio culture economic activities . It has also been found that the KVKs also do not make sincere efforts to motivate the farmer properly due to shortage of staff. Since this is one of the important activity of the KVKs, serious efforts should be done to find out the proper reasons behind this. Provision of some cases incentives could also be thought out to enhance the presence of the poor farmers in there activities.
10. During the course of survey the investigators of all SRDE discussed with the incharge officer of the KVKs & line departments regarding the overall functioning of the KVKs. While at discussions most of the district level officer of the various department told that the KVKs don't consult them properly before launching their activities, where as incharge officer of the KVKs told that the district level Govt. functionaries do not give much importance to the activities of the KVKs. It seems that there is too much gap in the understanding in between the KVKs and the line department, which could be avoided. In this direction some sincere efforts would be welcome.